

VOL. 86

NO. 5

C677
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A Preview Of
Atlantic City
Page (63)

textile bulletin

MAY • 1960

A. M. I. And The Import Problem	99
Cotton Quality And Mill Operation	103
A Measurement Of Combing Efficiency	108
Plant Profile — Eagle & Phenix Mills	113
Satisfying Retailer Quality Standards	

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Sorry!

we
missed
the
show

At Atlantic City, but we hope you will be able to see the West Point PACESETTER slasher in action at one or more of the over 200 modern West Point slasher installations made in the last four years. We will be at the Greenville Textile Show, October 1960, however, and will welcome your visit there. In the meantime call or write West Point for complete information on the slasher that is *Tops in Quality* and the industry Sales Leader—The Pacesetter.

WEST POINT < Foundry & Machine Company
WEST POINT, GEORGIA

GOOD! WOOD!

*Check your inventory
on wooden parts:*

Adapters & Cones

Battery Discs

Binders & Loom Swells

Clearer Boards & Rolls

Dobby Chain Cylinders

*Harness & Dobby
Sheaves*

Jack Sticks & Parts

Lays & Lay Parts

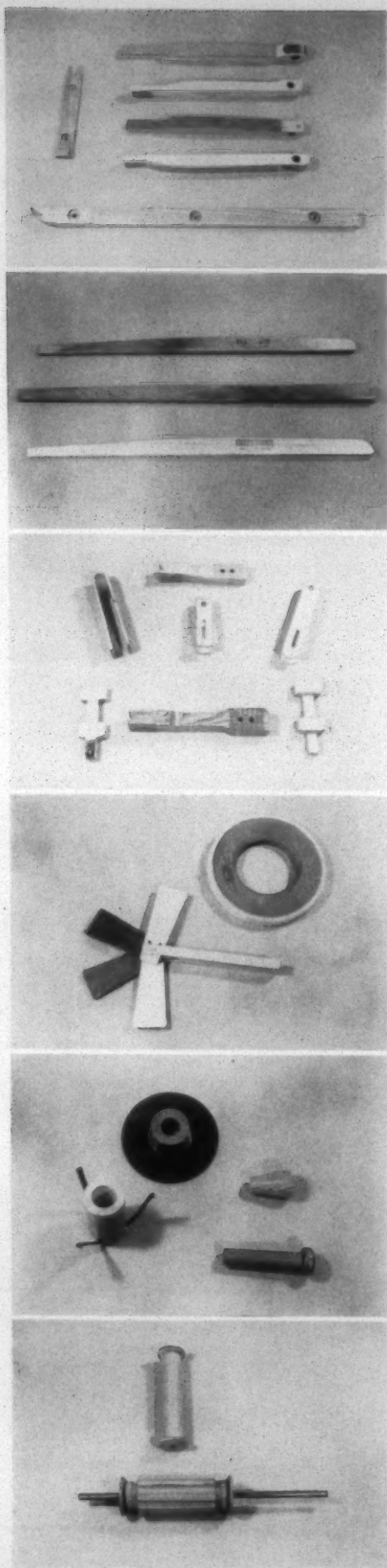
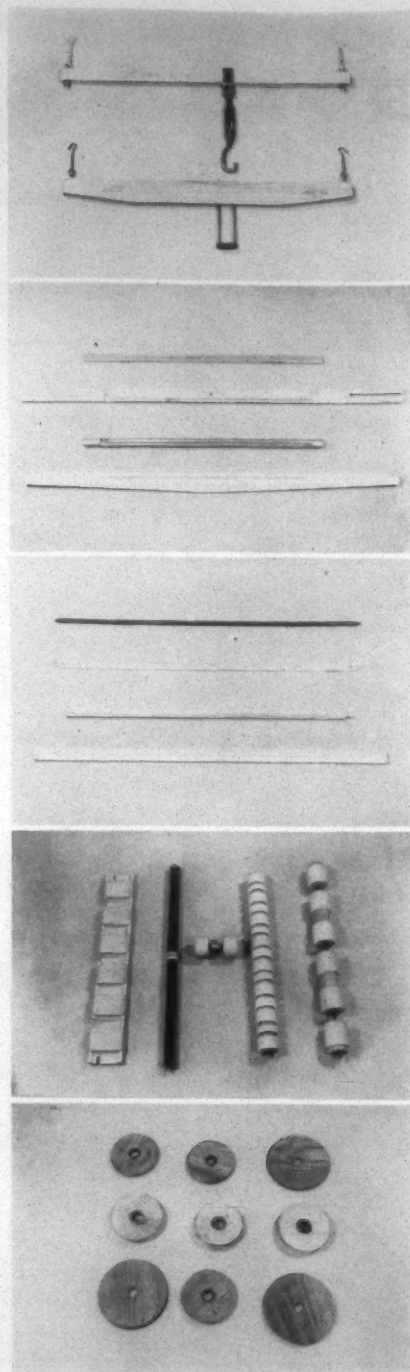
Handrails & Reed Caps

*Leece Rods & Warp
Clamps*

Loom Flags

*Lug Hold-ups, Blocks
& Straps*

Pickersticks



CHECK BATSON for good wood parts. Let us prove to you that our fine quality woods, excellent workmanship, prompt delivery make Batson your best source for wooden parts. Phone Greenville CEdar 2-7691 and take the woe out of your woods.

**P.O. Box 772
Greenville, S.C.**

**Louis P. Batson
Company**

PosiWate

All three top rolls are ball bearing

Each roll has two widely spaced ball bearings

Ball bearings are lint sealed and shielded

Makes increased weight possible

Front and back top rolls interchangeable

Positive weighting and weight distribution

Same weighting spindle to spindle

Dead weighting or new cartridge weighting

Rugged arm pivots on back bar rod

Exclusive cradle support protects aprons

Cap bars completely eliminated

Proper top roll alignment

Eliminates top arm springs and small parts

Cots revolve together for easy lap removal

Standard buffing provides .001 accuracy

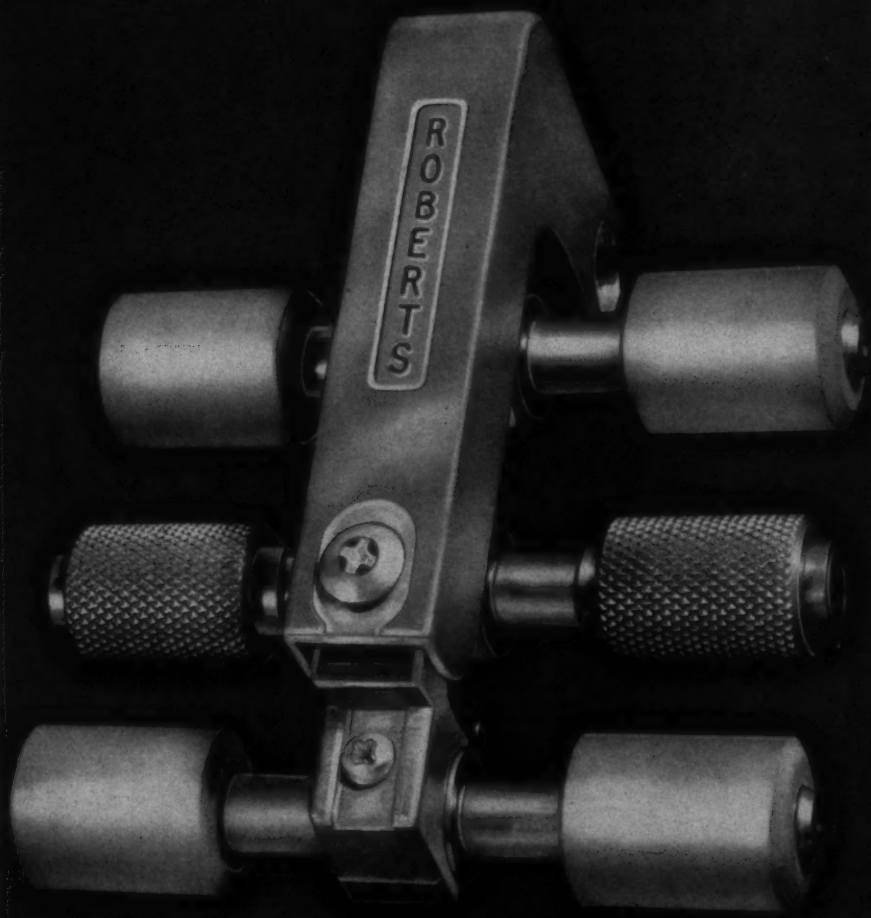
Easy cleaning on roll scouring cycles



ROBERTS COMPANY
450 Seventh Avenue, New York 1, New York
ROBERTS COMPANY DE MEXICO, S. A.
Avenida Reforma 915-A, Puebla, Pue.; Mexico
HOBURN-ROBERTS COMPANY, LTD.
Barton-On-Trent, Staffordshire; England

A 160,000 spindle mill thoroughly tested virtually all modern drafting systems for a six month period with positive results. Roberts Double Apron Drafting with **PosiWate** Top Roll Suspension produced yarn with the fewest ends down, best breaking strength and evenness. Besides, it was the best liked by the spinners themselves.

Roberts Double Apron Drafting is making quality yarn on more than 3½-million spindles. **PosiWate** Top Roll Suspension has been installed on more than 200,000 spindles in the past year and is being installed as a changeover for more than 30 frames every week.

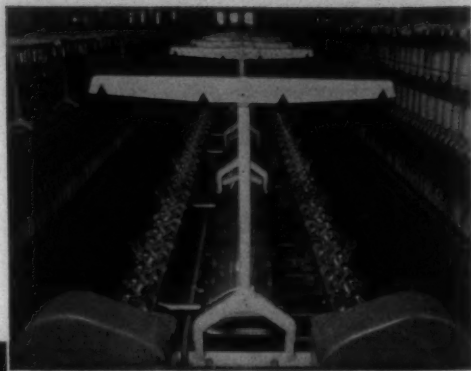


PosiWate TOP ROLL SUSPENSION

ROBERTS COMPANY

SANFORD, NORTH CAROLINA

Why the stamped steel cross-arms are notched



on the Bahnson Open-Aire Creel



Fundamental in Open-Aire Creel's special stamped steel construction for extra strength are the deep drawn steel cross-arms notched for maximum lateral rigidity. Longitudinal runners of stamped steel or extruded aluminum are fastened in the notches on the cross arms, thus fewer lint catching areas are exposed resulting in cleaner creel surfaces.

You get these additional benefits:

- baked enamel steel surfaces for less lint accumulation and for eliminating etching and corrosion
- slotted bobbin holder rails for flexible package positioning
- weight wire positioners to keep weights in correct operating position

- custom designed creel arrangements to suit your spinning requirements — 4/0, 4/2, 6/0, 6/2.

For consultation on your creel needs, clip coupon to letterhead and mail today.

Name _____

Bahnson

AIR-O-MATION

THE BAHNSON COMPANY • WINSTON-SALEM, N. C.

Atlantic City on the Stage Booth 11-18

Another product
in Gates complete line of
Textile Accessories

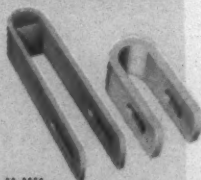


Why Gates Lug Straps last longer... insure smoother operation



Super Tex-Hide Lug Straps

Users report up to five times longer service on their heaviest looms from Super Tex-Hide than from any other strap.



New Thin-Tex Lug Straps

When extreme flexibility and much lighter weight are needed, Thin-Tex Lug Straps give up to 25% longer life than ordinary straps... and smooth out loom operation.

Because of the great strength of Tex-Hide—a product of Gates *Specialized Research*—the block can be molded into the strap without the use of bolts or rivets. As a result, straps are streamlined and light in weight.

Yet, because of their superb resilience, they give longer service, and smoother operation, *than any other strap you have ever used.*

2 big advantages of Gates Tex-Hide Lug Straps

1 Tex-Hide Lug Straps combine great strength with unsurpassed resiliency. They soak up blows and shocks *without taking any permanent stretch.*

2 Further, the great resiliency insures long life for *all parts* of the picking motion, and gives extended periods of operation *without any strap adjustments.*

The Gates Rubber Company
Denver, Colorado

Gates Rubber of Canada Ltd., Brantford, Ontario



*The Mark of
Specialized
Research*



Take-up Roll Coverings
Card Bands
Cone and Ewener Belts
Spinning Frame Drives



Reversible
Pickers



Tex-Hide
Harness Straps

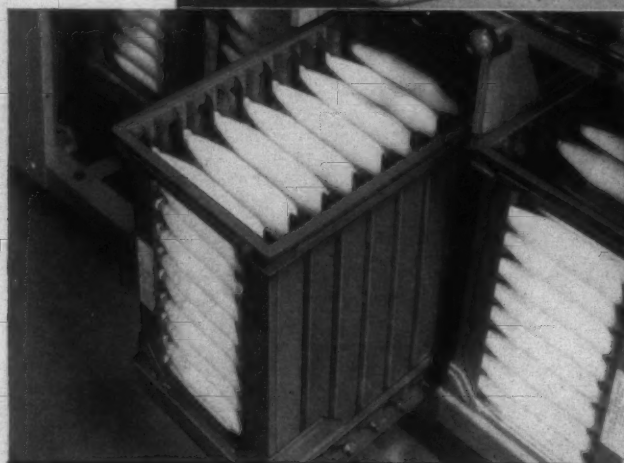


Tex-Hide and
Vulco Loop Pickers

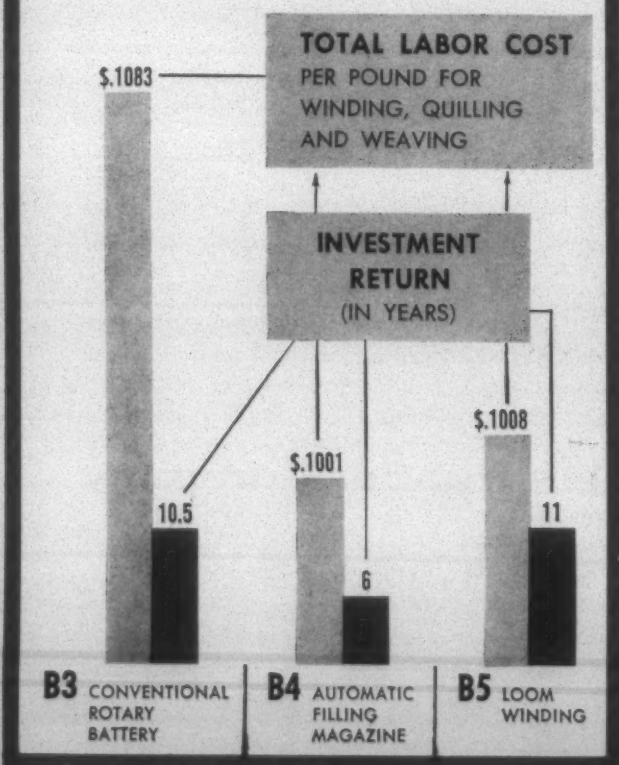


4-in-one Check Straps
Multi-Check Straps

Gates Textile Accessories



ONE OF MANY EXAMPLES: 15's average count, using 4.5 lbs. cone

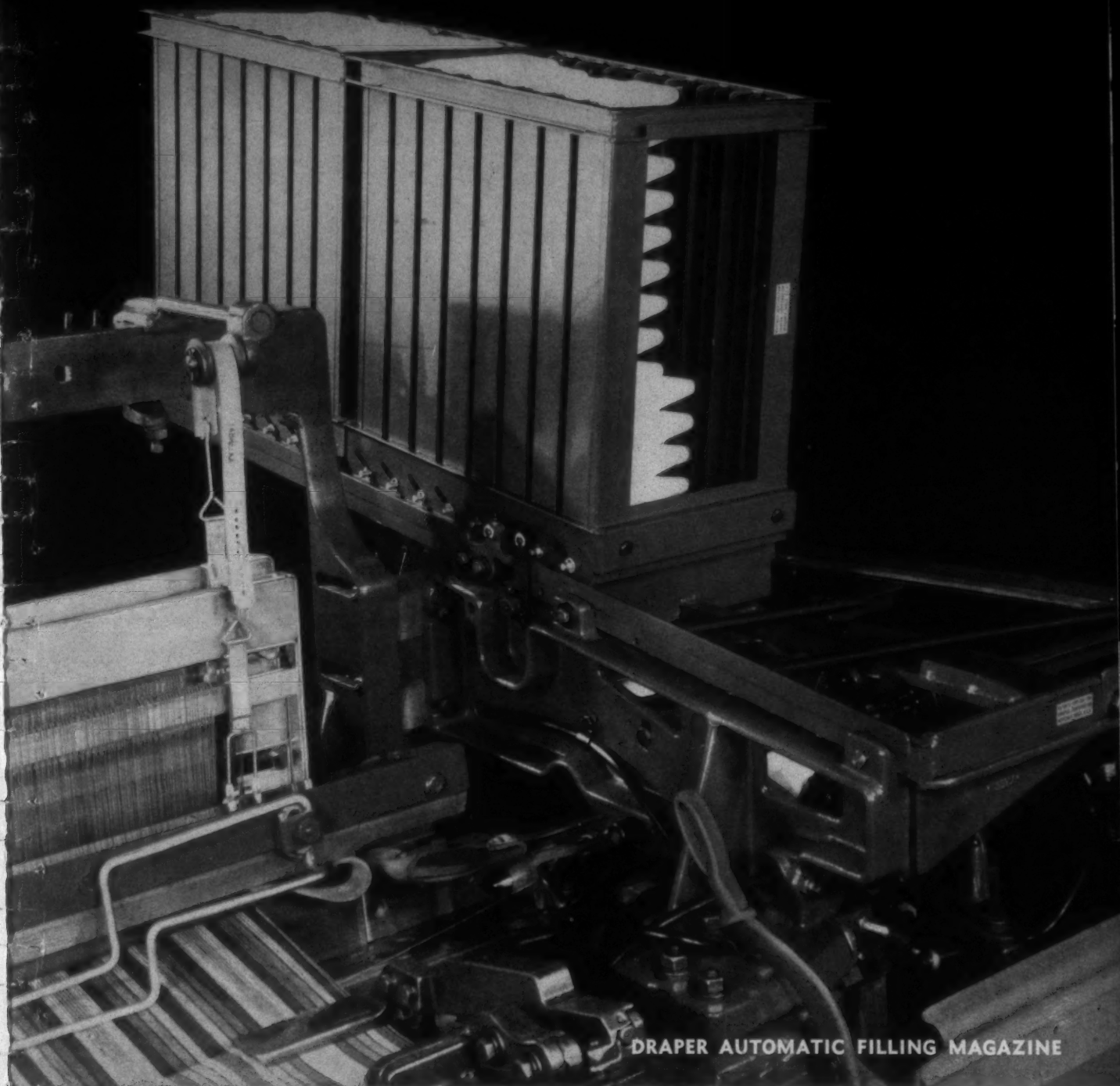


THE MOST ECONOMICAL FILLING PREPARATION NOW AVAILABLE... WITH *Schlafhorst* SERVOLOOM AUTOCOPSER

LOADING DRAPER
AUTOMATIC FILLING MAGAZINE

Call your nearest Terrell sales engineer for more examples and information, and investigate this new approach to mill automation at the International Textile Exposition.

THE
TERRELL
MACHINE COMPANY, INCORPORATED
CHARLOTTE, N. C., U. S. A.



DRAPER AUTOMATIC FILLING MAGAZINE

INCREASE *loom performance*
IMPROVE *cloth quality*
REDUCE *mill costs*

The Draper Automatic Filling Magazine, *brings new automation to your weave room . . . reduces filling handling to a minimum.*

Lower labor costs, more continuous loom operation, cleaner yarns and fewer cloth seconds are direct advantages gained from the use of this magazine.

Your Draper representative will be glad to show you the many benefits that can be obtained from the Draper Automatic Filling Magazine.



DRAPER CORPORATION



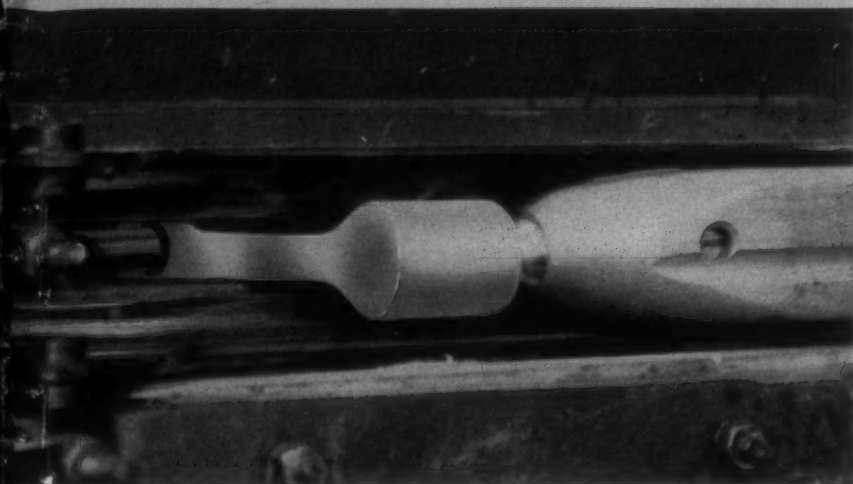
Parade of Progress...

HOPEDALE, MASS.

ATLANTA, GA. GREENSBORO, N.C. SPARTANBURG, S.C.

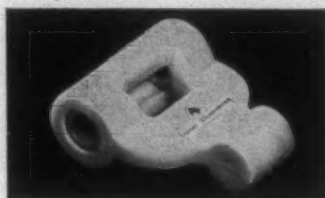


10 to 1 LONGER-LASTING than conventional types, cutting downtime to a minimum. Dayton's Golden Thorobred Drop Box Picker cushions the whole picking system thanks to a brand new kind of material developed after ten years of Dayton research.



EVERY WEAR POINT is cushioned by amazing elastomer properties of the Golden Thorobred. This amazing cushioning protects the shuttle from wear and the shuttle-point from loosening. Yet it withstands today's increased punishment from heavier shuttles. It cuts wear on the picker stick, too, with shock-absorbing qualities that take terrific impacts, minimizing breakage and repair parts costs.

REPLACEABLE BUSHINGS QUADRUPLE LIFE of Dayton's Golden Thorobred. Dayton's smooth-running Daylube bushings are easily and economically replaced to give Dayton's Golden Thorobred Drop Box Picker record performance, performance unheard of only a few years ago.



OUTLASTS OLD STYLE DROP BOX PICKERS 10 TO 1

**Dayton research revolutionizes
Drop Box Picker performance**

Dayton's Golden Thorobred Drop Box Picker is amazing mill superintendents and overseers in test after test, outlasting all conventional types 10 to 1 and out-performing them in economies. The Golden Thorobred is a real step forward in savings in loom downtime and picker replacement cost—a real dollar-saver that sets new economy records.

Test out Dayton's Golden Thorobred Drop Box Pickers through your local Dayton jobber or write for booklet from the Dayton Rubber Company, Textile Division, 401 South Carolina National Bank Bldg., Greenville, S. C.

Dayton Rubber



Dayco and Thorobred Textile Products
for Better Spinning and Weaving.

OVERSEAS PLANT: THE DAYTON RUBBER CO., LTD., DUNDEE, SCOTLAND.

New Elastomer makes big change in Drop Box Pickers

• • •

THE PASSING of one old timer and the restoration of another is the story behind the formulation of Dayton's Golden Thorobred Drop Box Picker. For, with the coming of this virtually indestructible new elastomer, the costly, old-time raw-hide picker made of water buffalo is now retired to the museums.

But, sometimes the coming of the new can *restore* the old, too. For all the toughness of the new Golden Thorobred Drop Box Picker—10 to 1 over all conventional kinds—it is gentle enough to permit the return of the hickory stick, replaced so extensively by the rigid laminates. This is a real boost to weaving because the slight whip of hickory is of great help to the shuttle. In the old days, abrasive pickers could cut the hickory in two.

The unusual "give" of the Golden Thorobred explains its longer-life and the elimination of so much of the downtime caused by ordinary pickers. Its cushioning action spares cast iron parts, too, a problem cost-finders and maintenance men long sought to have solved. And, of course, its capacity to absorb the punishment of today's heavier shuttles is one of its prime features.

Textile men also like the fact that Dayton's Golden Drop Box Picker bears a "Made in America" brand-mark in these days when textile imports of all kinds are effecting the market.



Criterion...

Seldom, if ever, has a new machine made such impact on spinners and spinning practices as has the Whitin Piedmont Spinning frame.

Today, when men who know their spinning get together, you'll find them talking about the Piedmont, using it more and more as a basis of comparison — a new criterion of performance.



And this is a perfectly logical conclusion, too, because the Piedmont is advanced in so many ways. Its production of high quality yarn at increased speeds; its simplicity of operation and maintenance; its sleek floor-saving, five-to-a-bay width — all these and many more cost-saving factors will have special appeal to the man who wants to make his spinning room more profitable.

PIEDMONT

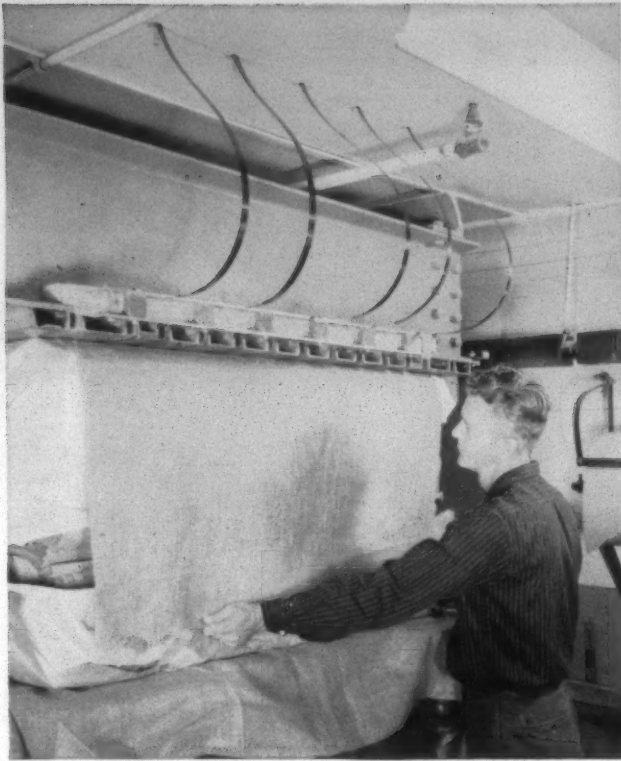
For complete information ask your
WHITIN
representative or write direct to us



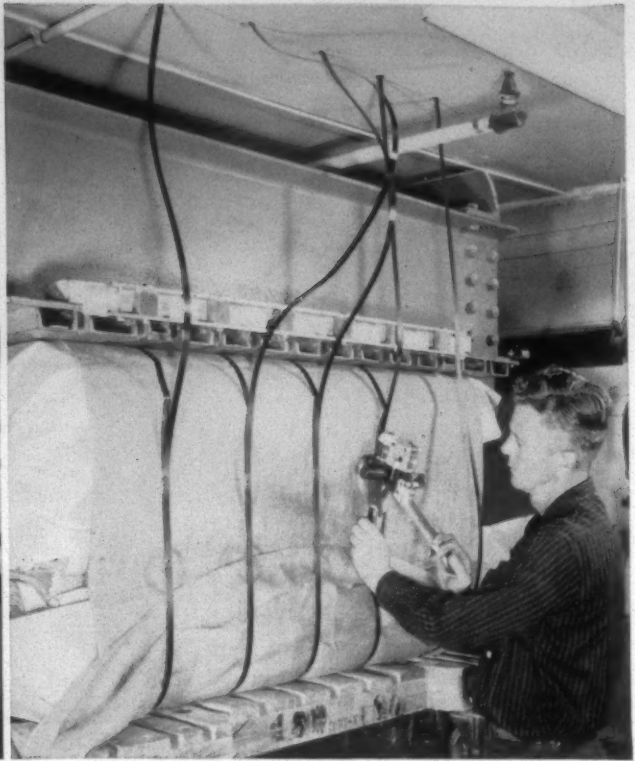
Geigy Dyestuffs for Textiles, Paper and Leather

Geigy Dyestuffs, Ardsley, New York. Technical Service at all branches:
Charlotte, Chattanooga, Chicago, Los Angeles,
Newton Upper Falls, Philadelphia, Portland, Toronto, Canada.

See Geigy for Service

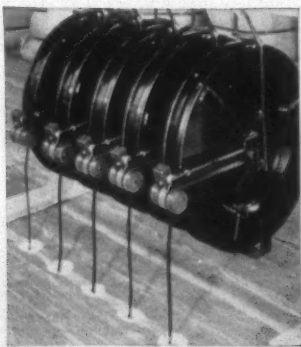


Strapping is fed from dispensers in room above press. A magnetized bar holds the straps in position while bale is readied.

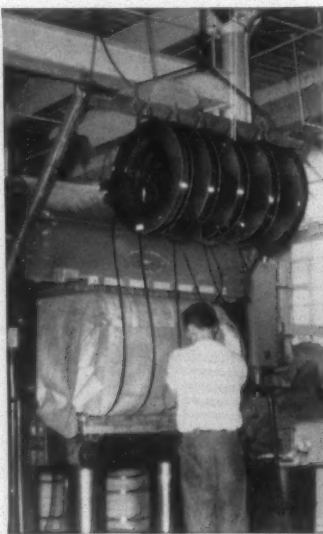


Signode's exclusive Model SFC tool tensions the strapping, feeds seals from magazine, and crimps them. Straps are severed at the seal. No waste strap.

Signode way produces denser bales and reduces strap use by 17%



Strapping dispensers can be in a variety of locations. Above, they are shown set up in an overhead storage area; at right they are shown installed on a framework over the press. They may also be installed on the floor beneath the press or behind the operator.



Here's an example of a simple and inexpensive answer to a packaging problem. Waste—which was part of the former cut-to-length strapping method—was eliminated, with a 17% saving in the amount of strapping used. Bales are better looking. Their increased density saves about 7% of valuable space in storage and shipment. The entire strapping operation is simplified, goes easier and faster.

Why not let a Signode man take a new look at your packaging and shipping operation. He has an eye for savings, specialized knowledge of textile applications, and a complete line of strapping tools and machines at his disposal. Call him today, or write:



First in steel strapping

SIGNODE STEEL STRAPPING CO.

2665 N. Western Avenue, Chicago 47, Illinois

Offices Coast to Coast. Foreign Subsidiaries and Distributors World-Wide
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REDUCE DOSAGE...

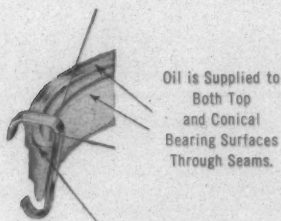
Says the Doctor

The New "M" Type Conical Ring
needs only drops of oil to produce

- More Uniform Lubrication Without Oil Waste.
- Longer Traveler Life.
- Longer Ring Life.
- Cleaner Yarn.
- Higher Spindle Speeds.
- Reduced Yarn Breakage.

The "M" Type Herr Conical Ring introduces a new, controlled method of lubrication. This outstanding improvement in ring lubrication is called Seam Lubrication — a method that utilizes the principle of capillary attraction. Thoroughly tested for several years in some of the largest textile plants, the "M" type Herr Ring provides more uniform lubrication than has been possible before.

There is no oil waste. Every drop of oil is utilized being drawn by capillary attraction through the top and conical seams. There are no wicks that leak oil — no rewicking. The operation is clean. Maintenance costs are lowered. Oil consumption is greatly reduced, yet faster spindle speeds are possible without extra wear to ring or traveler. Write today to get all the facts that make new profits.



Oil Flows to Annular Reservoir Within the Ring, Then is Drawn by Capillary Action Through Seams.



HERR

MANUFACTURING CO., INC.

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FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON, FIBERGLASS AND BLENDED YARNS OF ALL TYPES

Visit us at our booth—69 and 70—at the Annual Textile Machinery Exhibit, Atlantic City, May 23-27

FOSTER

MODEL 506

CONE WINDER

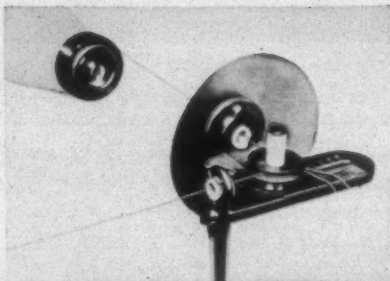
*It's NEW! It's Advanced in Design!
It's Economical! It's Practical!*

SEE IT IN OPERATION AT...
A.T.M.A. EXHIBITION
BOOTH 649 • MAY 23-27 • ATLANTIC CITY

WE WILL ALSO EXHIBIT

LINDLY ELECTROTENSE

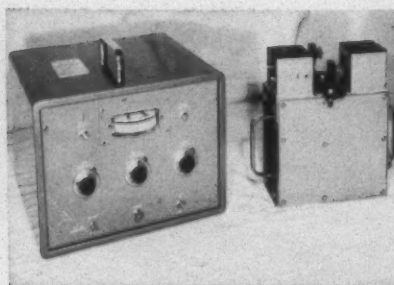
A yarn tensioning device for warper creels, winders, twisters, knitting machines, looms and similar equipment. It provides completely uniform tension for any number of ends and permits the overall adjustment of tensions by means of a single dial.



... the following Lindly Electronic Controls and Detectors, for which we are exclusive selling agents in the textile industry in the U. S. A.

VISIT US at BOOTH 649

... and see the last word in cone winding and electronic controls for the textile industry.



LINDLY DYNA-MICRO-GAGE

A photoelectric testing device for the continuous monitoring of spun and filament yarns and for checking the average denier of filament yarns, the uniformity of spun yarns and other operational elements that call for varying degrees of sensitivity.

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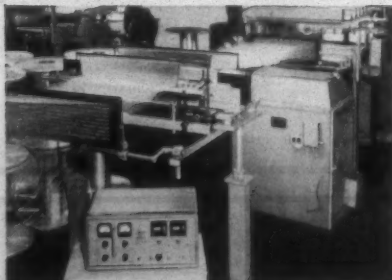
A Yarn Winder for Every Purpose

Westfield, Massachusetts, U. S. A.

EXCLUSIVE SELLING AGENTS FOR LINDLY ELECTRONIC CONTROLS IN U. S. TEXTILE INDUSTRY

LINDLY AUTOMATIC YARN INSPECTOR

A high-speed, ultrasensitive photoelectric instrument for detecting yarn defects such as broken filaments, strip-backs and fluff balls in warping.



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116-0

New
Compartment Washer

New Method of
Applying
Pneumatic Pressure to
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New Concept
of
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and Doffing

Latest
High-Speed Tenter
with
Newly Engineered Clips

Latest
Cylinder Dryer

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This is your invitation to see what's new
in textile finishing machinery at
the American Textile Machinery Exhibition
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At the Butterworth exhibit, just inside the
main entrance, you will see new machinery,
new finishing techniques — the
result of Butterworth's 140 years
of machine-building experience.

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Division of Van Norman Industries, Inc.
BETHAYRES, PA.

"down time" goes down...stays down

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When you specify CARTER TRAVELERS, you insure smooth, trouble-free spinning and twisting regardless of yarn count or spindle speeds.

Why? Because precision engineering—skilled craftsmen working with modern machinery—plus scientific laboratory quality

control give you a product that cuts worry-time to a minimum...increases smooth running time.

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BOYCE WEAVERS KNOTTER GASTONIA, NORTH CAROLINA

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Call TRinity 6-1797

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Headquarters for textile chemicals
SEYDEL-WOOLLEY & CO.

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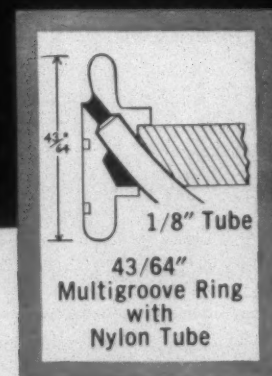
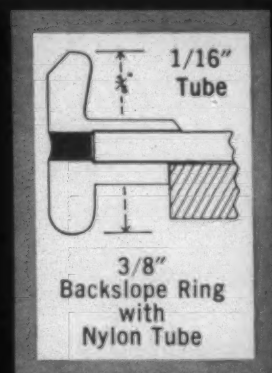
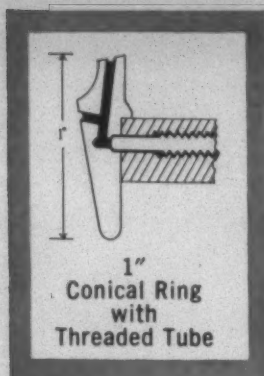
Warp Sizing: Softeners, Binders, Penetrants, Ty-In Penetrants, Shuttle Dressing, Waxes.

Wet Processing Chemicals and Auxiliaries: Dye Assistants, Penetrants, Rewetting Agents, Sanforized Fabric Oils, Detergents, Scouring Agents, Softeners.

Niagara Twist-Setter: Yarn Conditioning Penetrants.

Seyco Warp Lubricator.





We specialize in Engineered Rings for Automatic Lubrication Metered and Timed

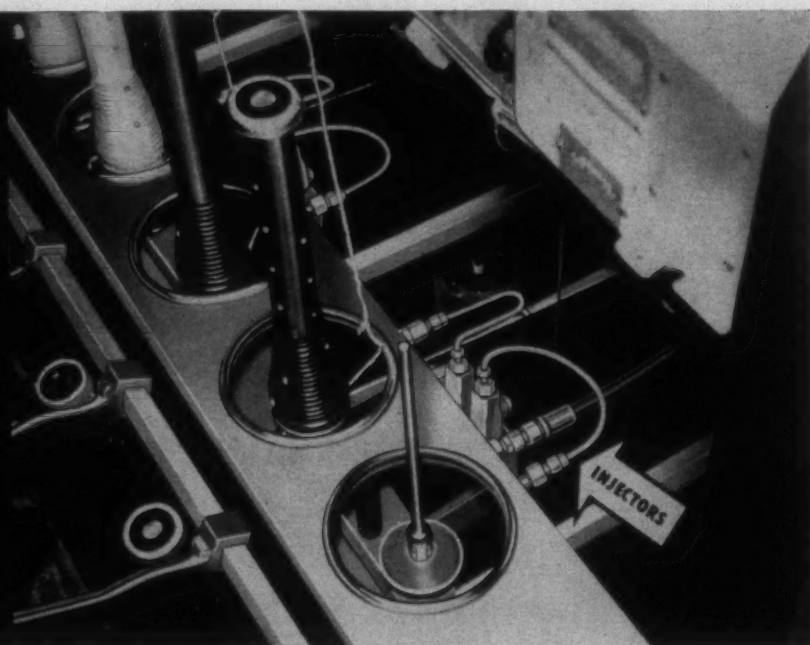


Photo Courtesy of Lincoln Engineering Co., St. Louis

The automatic centralized lubrication systems installed by Lincoln and Alemite are designed for utmost precision . . . supplying lubricant to the rings in amounts which can be metered to .0002 oz. . . at intervals timed to predetermined cycles which can be varied as the running of the work dictates. Thus the system delivers the lubricant at the ring with high precision . . . but the ring then has to deliver it to the traveler.

At DIAMOND FINISH we have developed the tooling and quality controls to assure a perfect seal with the various types of intake fittings . . . and what is equally important, to assure truly effective lubricant distribution over traveler contact areas. (examples at left are merely typical — we can accommodate any type fitting).

To obtain rings for centralized automatic lubrication, take advantage of our proven methods which are operating with outstanding success on wool and worsted, rayon, synthetics, glass, paper, asbestos and other fibers.



WHITINSVILLE (MASS.)
SPINNING RING CO.
Makers of Spinning and Twister Rings since 1873



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Representative for
the Carolinas & Va.
P. O. Box 406,
Belmont, N. C.

H. L. WILLIAMS
Representative for
Ala., Ga. & Tenn.
Box 222,
West Point, Ga.

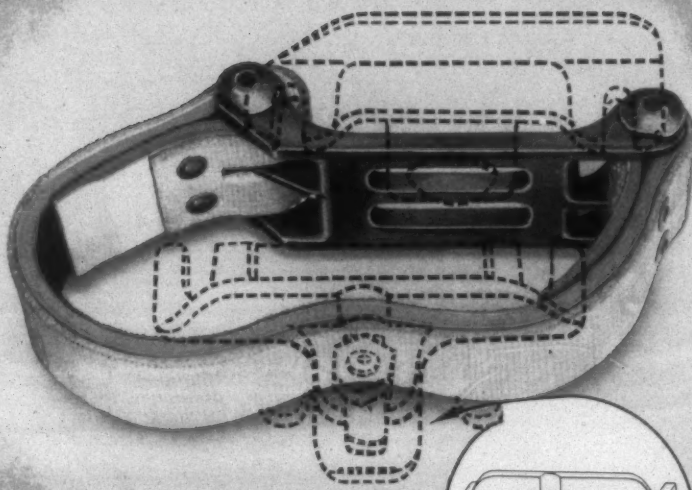
Run your looms faster ... longer... with better boxing and less power...

Nucheck

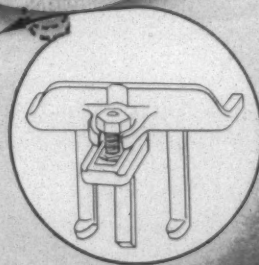
PRODUCT OF SLIP-NOT BELTING CORP.

You Check Nucheck:

- Greater efficiency . . . looms can be operated at high speed with less power
- Perfect boxing
- Low initial cost
- Lower replacement cost because of Nucheck's longer life: there are no holes to wear out
- Simple design, no extra parts
- Easily attached to the loom with a single wrench
- Free-pivoting action eliminates "Monday morning" start-up problems and breakage



PATENT: 2,862,896
OTHER PATENTS PENDING



TEST-PROVED to be the best checking device for high-speed looms

Check the many Nucheck advantages and you'll see why weaverrooms who have tested Nucheck agree that it is the best checking device on the market today. Models available for X, X-2, XD, XL, S-5, S-6 and many other looms. Equipped with our finest Hair Leather in all-leather strap or leather-and-fabric combination strap.

Get top speed . . . smoother boxing . . . longer life . . . the Nucheck Way . . . test-proved the best checking device on the market.

Weaverroom tests prove Nucheck assures greater efficiency . . . greater economy for today's high-speed looms

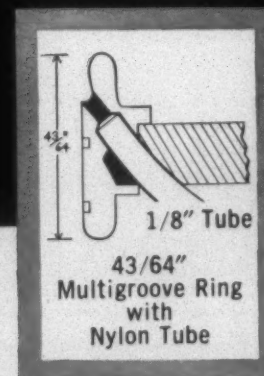
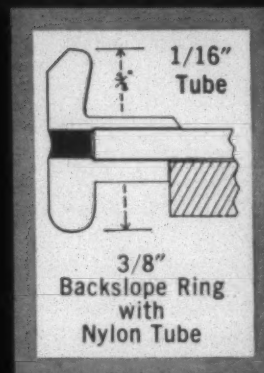
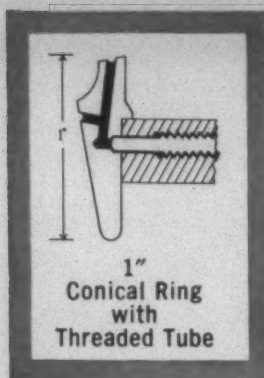


SLIP-NOT BELTING CORP.

Manufacturers and Distributors of Power Transmission Equipment

KINGSPORT, TENNESSEE





We specialize in Engineered Rings for Automatic Lubrication Metered and Timed

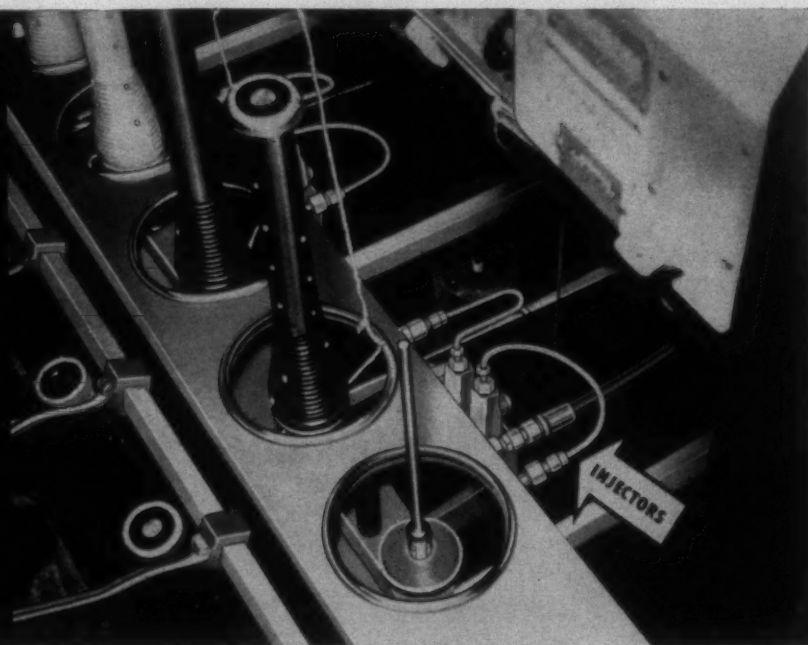
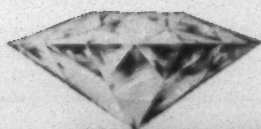


Photo Courtesy of Lincoln Engineering Co., St. Louis

The automatic centralized lubrication systems installed by Lincoln and Alemite are designed for utmost precision . . . supplying lubricant to the rings in amounts which can be metered to .0002 oz. . . at intervals timed to predetermined cycles which can be varied as the running of the work dictates. Thus the system delivers the lubricant at the ring with high precision . . . but the ring then has to deliver it to the traveler.

At DIAMOND FINISH we have developed the tooling and quality controls to assure a perfect seal with the various types of intake fittings . . . and what is equally important, to assure truly effective lubricant distribution over traveler contact areas. (examples at left are merely typical — we can accommodate any type fitting).

To obtain rings for centralized automatic lubrication, take advantage of our proven methods which are operating with outstanding success on wool and worsted, rayon, synthetics, glass, paper, asbestos and other fibers.



WHITINSVILLE (MASS.)

SPINNING

Makers of Spinning and



RING CO.

Twister Rings since 1873

W. K. SHIRLEY
Representative for
the Carolinas & Va.
P. O. Box 406,
Belmont, N. C.

H. L. WILLIAMS
Representative for
Ala., Ga. & Tenn.
Box 222,
West Point, Ga.

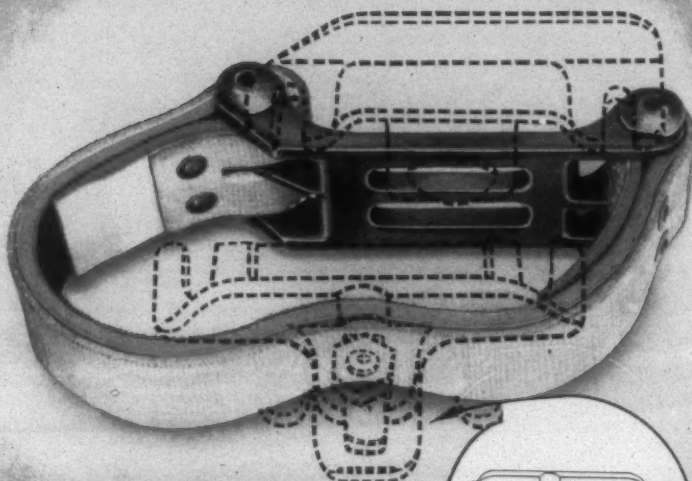
Run your looms faster ... longer... with better boxing and less power...

Nucheck

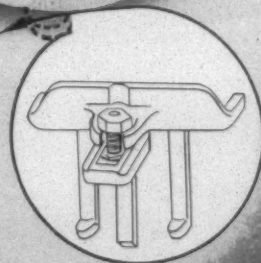
PRODUCT OF SLIP-NOT BELTING CORP.

You Check Nucheck:

- Greater efficiency . . . looms can be operated at high speed with less power
- Perfect boxing
- Low initial cost
- Lower replacement cost because of Nucheck's longer life: there are no holes to wear out
- Simple design, no extra parts
- Easily attached to the loom with a single wrench
- Free-pivoting action eliminates "Monday morning" start-up problems and breakage



PATENT: 2,862,896
OTHER PATENTS PENDING



TEST-PROVED to be the best checking device for high-speed looms

Check the many Nucheck advantages and you'll see why weaverrooms who have tested Nucheck agree that it is the best checking device on the market today. Models available for X, X-2, XD, XL, S-5, S-6 and many other looms. Equipped with our finest Hair Leather in all-leather strap or leather-and-fabric combination strap.

Get top speed . . . smoother boxing . . . longer life . . . the Nucheck Way . . . test-proved the best checking device on the market.

Weaverroom tests prove Nucheck assures greater efficiency . . . greater economy for today's high-speed looms



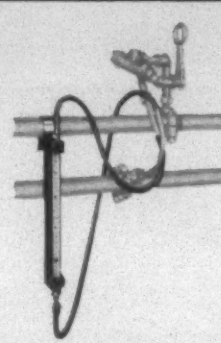
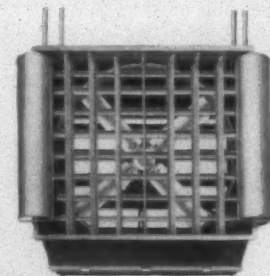
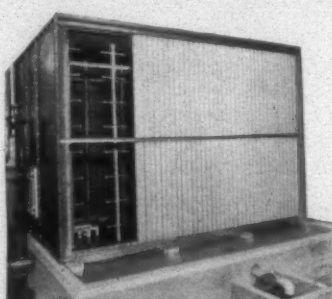
SLIP-NOT BELTING CORP.

Manufacturers and Distributors of Power Transmission Equipment

KINGSPORT, TENNESSEE



These Amco Air Conditioning Devices are designed for close control of atmospheric conditions within your mill

 <p>No. 6 Atomizer</p>	 <p>Atometer</p>	 <p>Humidity Control</p>	 <p>Aeromizer</p>
 <p>Evaporative Cooling Unit</p>	 <p>Air Washer</p>	 <p>Modulating Interrupter</p>	
 <p>Ceiling Cleaner</p>	 <p>Loom Cleaner</p>	 <p>Sling Psychrometer</p>	 <p>Blow-Thru Diaphragm Valve</p>

See them at the
TEXTILE SHOW
at
ATLANTIC CITY
May 23-27 • Booths 51-56

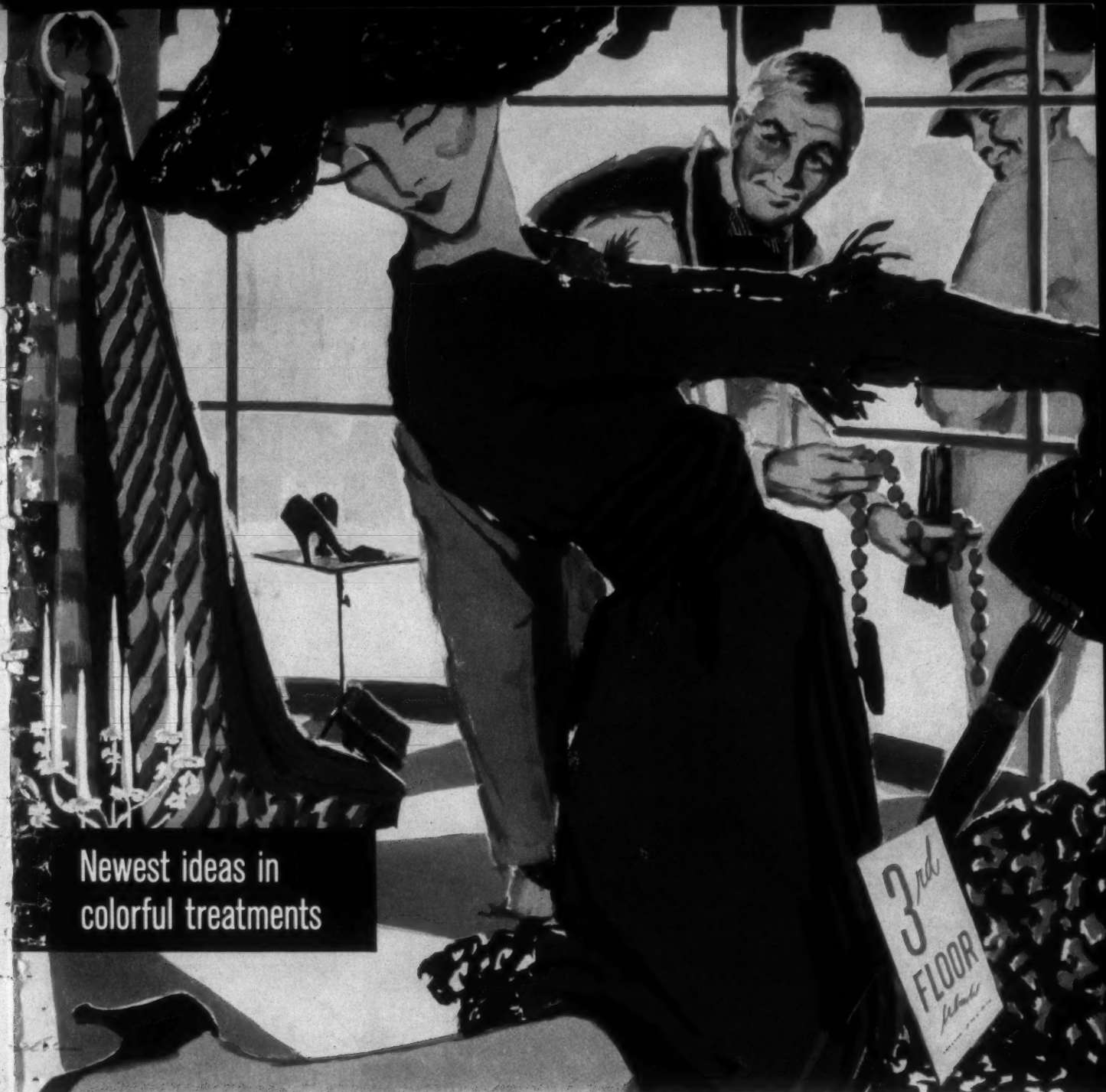
Amco Air Conditioning Devices are *quality* textile mill equipment . . . backed by a company with more than 70 years experience in solving textile air treatment problems. You can always rely on Amco to give you dependable advice and an expert installation best suited to your needs.

AMCO

Since 1888

Air Conditioning Equipment — Textile Specialties

American Moistening Company, Cleveland, North Carolina
Branches: Atlanta, Ga., Providence, R. I., Toronto, Ont.



Newest ideas in
colorful treatments

Prize fabrics that stop the eye . . . start the sale with Koppers dyes!

Brighten your sales picture with Koppers Dyes that set the mood for selling—developed to compliment every fiber with lasting, fresh color appeal. Today, color-conscious moderns have an educated eye for clean, rich shades with excellent fastness properties. AMACID* and CHROMAVEN* DYES bring out the full beauty of your

woolens . . . AMACEL*, LENRA* and AMACRONS*, your synthetics—to help sell the fabrics on sight. These dyes, with excellent dispersibility and fastness properties, assure uniform results that meet every requirement. And don't forget, our *technical service* and complete laboratory facilities are always available. Call or write today.

*REG. U.S. PAT. OFF.

KOPPERS COMPANY, INC. CHEMICALS AND DYESTUFFS DIVISION

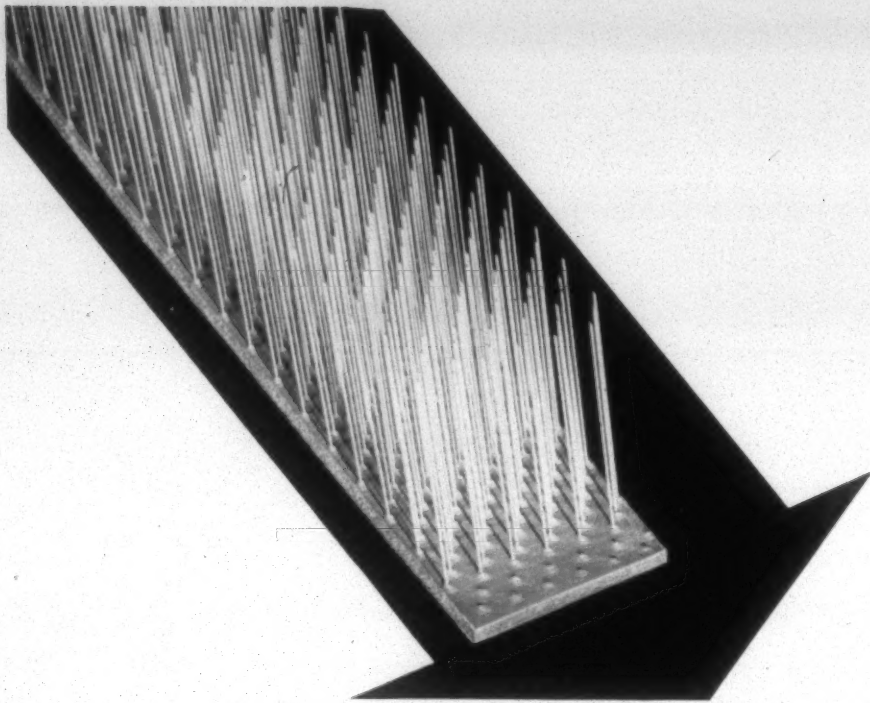
Pittsburgh 19, Pennsylvania

(FORMERLY AMERICAN ANILINE PRODUCTS) PLANT: Lock Haven, Pa.

BRANCHES: Providence, R. I. • Philadelphia, Pa. • Paterson, N. J. • Chicago, Ill. • Charlotte, N. C. • Chattanooga, Tenn.
Columbus, Ga. • Los Angeles, Calif.

IN CANADA: Dominion Anilines & Chemicals, Ltd., Toronto, Canada • Montreal, Canada





Straight as a Ramrod Perfect in Alignment—

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The carefully ground teeth of Tufferized Card Clothing are set with military precision in Tuffer foundation to suit the individual job.

These tough wires stand straight and firm as a ramrod, with just the proper flexibility, and with every point in exact position.

Tuffer precision craftsmanship produces the consistently uniform Card Clothing you want for a smooth, even sliver with minimum variation.

You're sure of maximum production with Tuffer. For special problems, a Tuffer sales engineer with access to the accumulated manufacturing experience of more than 90 years, is always available.

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- Top Flats re-covered and extra sets loaned at all Plants
- Lickerins rewired at Southern Plants
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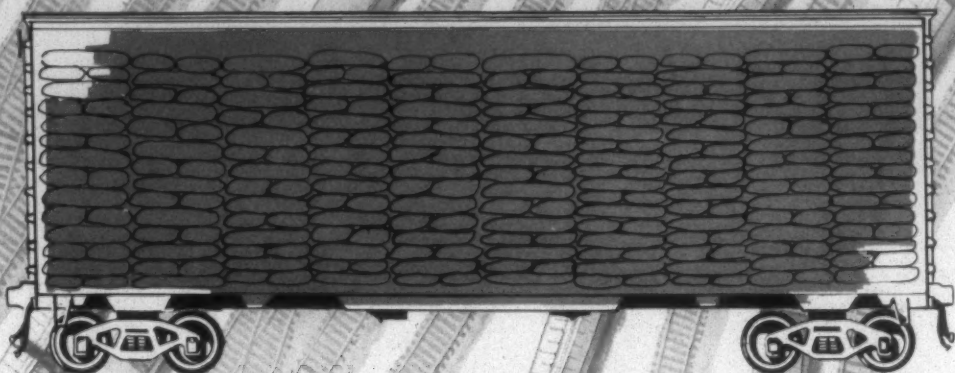
HOWARD BROS.

WORCESTER 8, MASSACHUSETTS

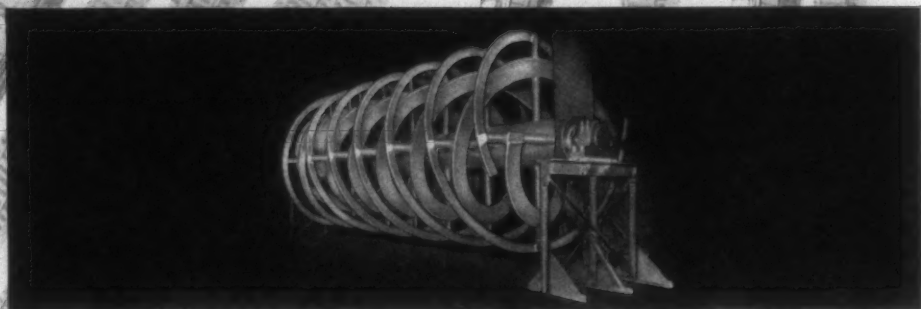
Southern Plants: Atlanta, Ga., Gastonia, N. C., Greenville, S. C.

Direct Representation in Canada

now you can have



starch uniformity by the carload



from the world's largest blender

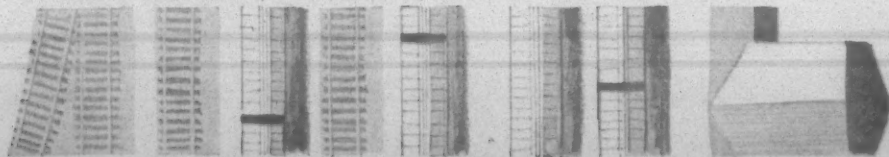
New Penick & Ford Blender ensures production quantities at pilot plant tolerances

The big advantage of having your corn starches mixed in the world's largest blender is not size of batch, but the perfect starch uniformity you get . . . up to 60,000 lb. with one bag exactly the same as the next. The blender is part of Penick & Ford's new starch derivative plant

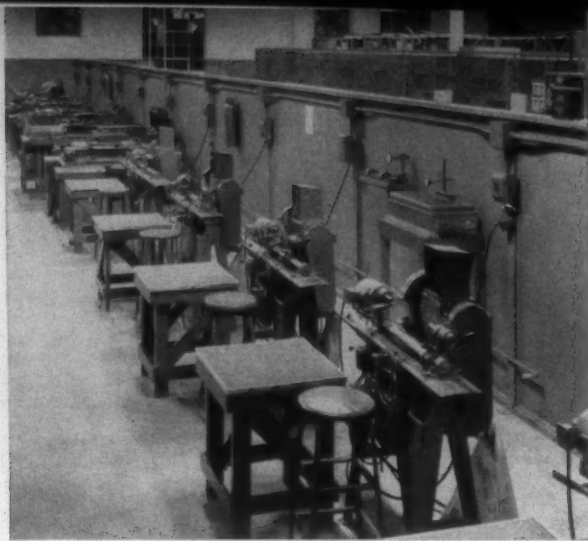
which is designed to deliver corn products of improved quality and precise uniformity. With its new facility, P & F can offer industrial starch users production quantities to exact customer specifications, no matter how large or small the order. Call

PENICK & FORD, LTD.
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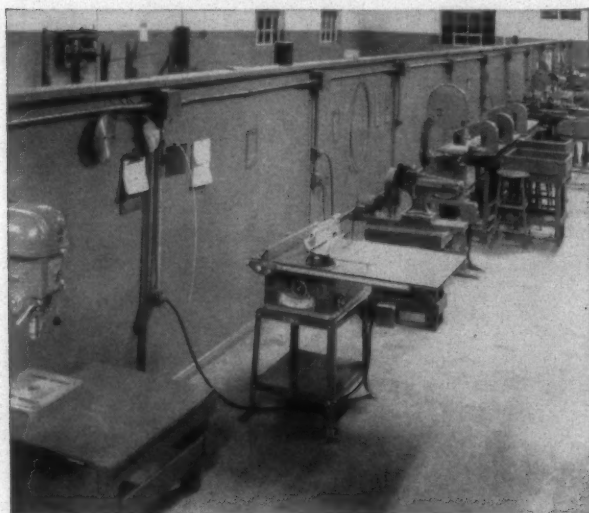
750 THIRD AVE., NEW YORK 17, N. Y.; 1531 MARIETTA BLVD., ATLANTA, GA.; CEDAR RAPIDS, IOWA; 18 CALIFORNIA ST., SAN FRANCISCO 11, CALIF.



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better



A big new roll shop. Re-covering and buffing of almost any type of roll are done rapidly by skilled mechanics, using buffing machines designed by Armstrong.



Well-equipped machine shop. Work incident to re-covering various type rolls—and the preparation of loom binder strips—is done on these modern machine tools.





Ample inventory. This is only part of our large stock of Accotex Cots and Aprons. This big inventory helps us to fill your emergency orders on very short notice.



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Prompt delivery. Greenville's excellent truck, rail, and air transportation facilities make possible overnight delivery to many points in the textile South.



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Here is our new textile facility located in Pleasantburg Industrial Park at Greenville, South Carolina.

It houses a big new roll shop, greatly expanded warehousing and shipping areas, bright, efficient offices.

This new facility makes it possible for us to give you even better service with the full line of Armstrong Accotex textile supplies.

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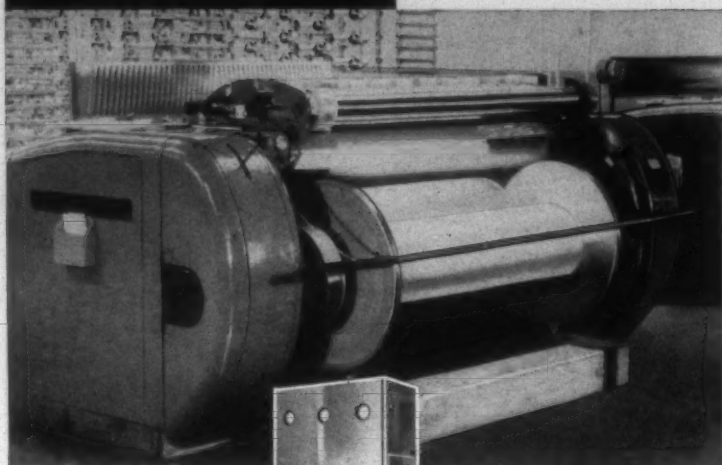
Armstrong

TEXTILE SUPPLIES

1860-1960 *Beginning our second century of progress*



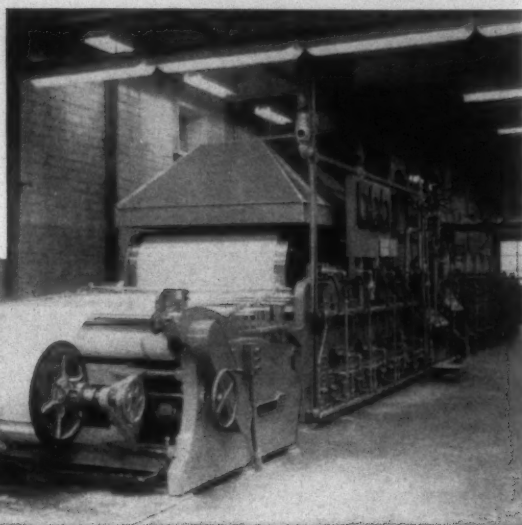
THIS



The Cocker SD49 Warper and Creel



The New Cocker GH Slasher



+ THIS



The Nemo Jet Cooker

+ THIS

— The World's FINEST Warp Preparation

ONLY COCKER has had experience in all types of warp handling problems, and only Cocker produces all types of warp handling equipment. You get the finest warps in the world with a co-ordinated all-Cocker installation.

High Speed Rayon Warpers
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47 YEARS IN THE SOUTH

Visit Cocker—Spaces 615 through 620 and 629 through 634 at the ATMA Exhibition

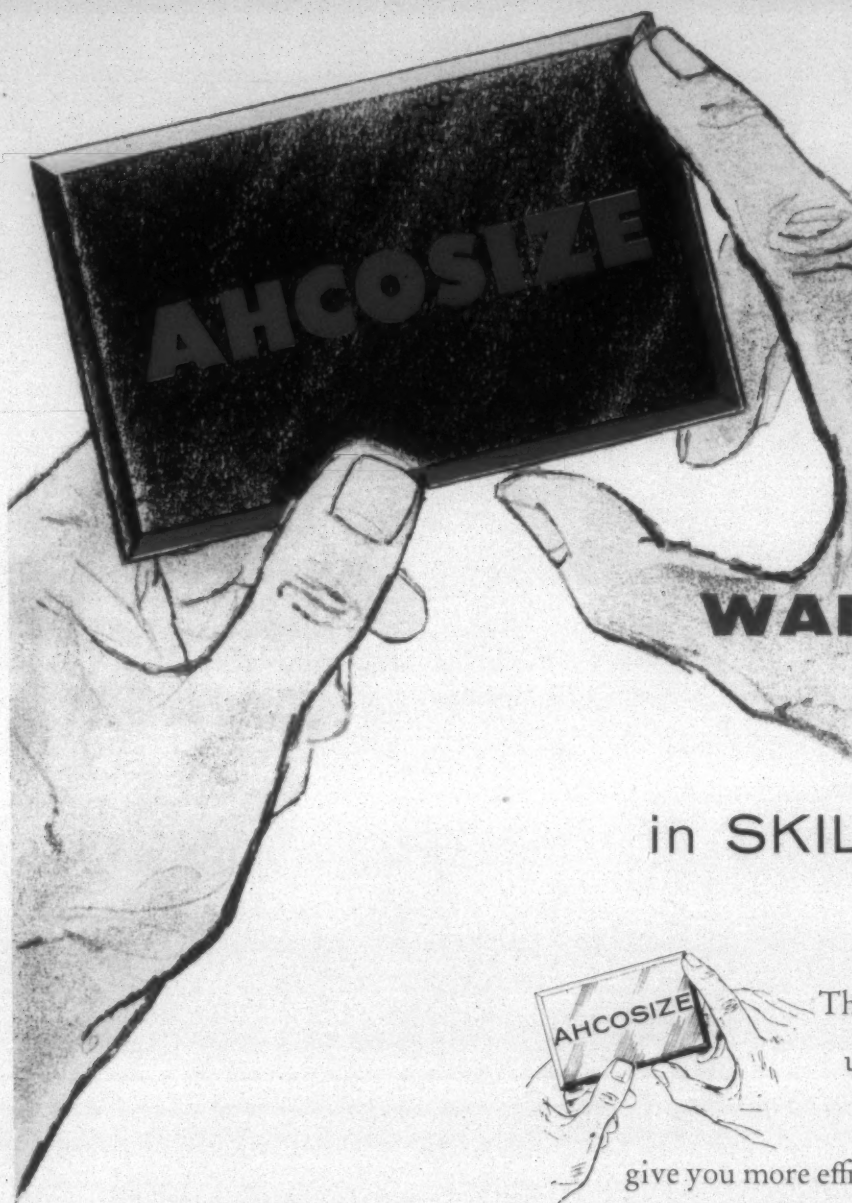
COCKER MACHINE & FOUNDRY COMPANY

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**WORLD'S LARGEST DESIGNERS
AND BUILDERS OF COMPLETE
WARP PREPARATORY EQUIPMENT**



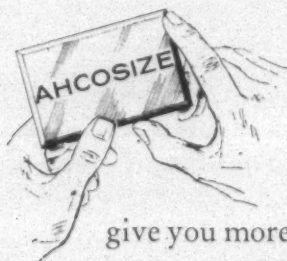
**ARNOLD,
HOFFMAN**

invites you
to put your

WARP SIZING

PROBLEMS

in **SKILLED HANDS**



These are hands that can provide
unusual skills, greater facilities
and more extensive services to
give you more efficient warp sizing and weaving.

From these hands you can draw on a broad new range
of warp sizing lubricant products developed over
years of experience and through practical research.

Make your slasher room the most efficient in
the history of your plant . . . with AHCOSIZE !

Ask for Ahcosize Bulletin No. 2004



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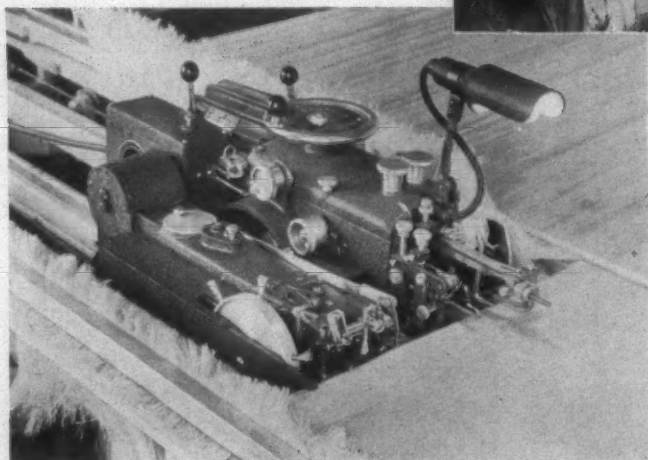
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477-9

THE WARP TYING MACHINE



**TIES WARPS
EASIER —
FASTER —
MORE ECONOMICALLY!**

TITAN Warp Tyers have won world-wide recognition for maximum dependability under all operating conditions. Backed by many years of specialized technical knowledge in warp tying, mill-tested TITAN units are modern in all respects. Fabricated in stainless steel and chromium plated to eliminate all corrosion problems, all 3 TITAN models assure maximum efficiency, ease of operation, and lowest maintenance costs.

TITAN machines work equally well with all types of warps — **permitting easier and faster preparation of warp and pattern.** Tying is performed effortlessly without stumbling or fumbling — knots are passed through smoothly and quickly because tails adjust readily to varied yarn counts.

You can depend on TITAN for superior performance on all counts, including prompt spare parts and unexcelled engineering service. **PRODUCTION-WISE or SERVICE-WISE you can't beat TITAN — ask the mill which has one.**

You can see the latest model TITANS in actual operation at the AMERICAN TEXTILE MACHINERY EXHIBITION, Atlantic City, N. J., May 23-27, Booths #1227-28 & 1310-11.

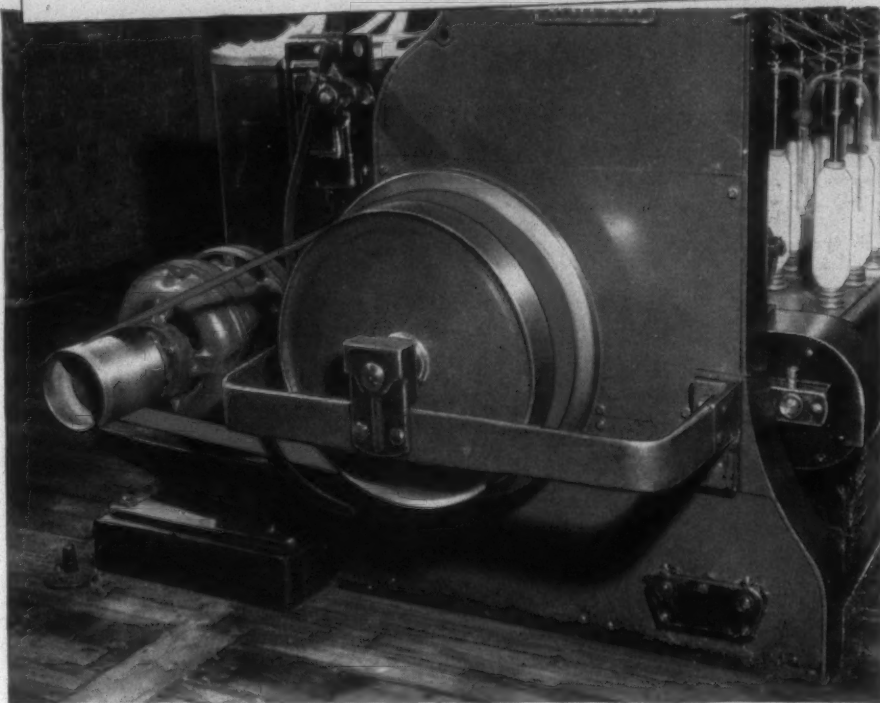


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CALHOUN TOWERS, GREENVILLE, S. C.

AT THE TEXTILE MACHINERY SHOW . . .



**THE
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QUALITIES
OF
EXTREMULTUS
BELTING
WILL BE
DEMONSTRATED
AT
BOOTH 388**

SEE HOW

EXTREMULTUS BELTING CAN IMPROVE YOUR PRODUCTION

Be sure you see EXTREMULTUS belting demonstrated at the show. This truly modern belt drive . . . proven in hundreds of textile mills . . . will eliminate stretch, stop slippage . . . can reduce your belt maintenance costs . . . improve machinery efficiency on cards, roving frames, twistors, winders and looms. See for yourself how this amazing belt can increase production at your mill.

**SEE EXTREMULTUS
AT BOOTH 388**

EXTREMULTUS, Inc.

25-11 40th Ave.
Long Island City 1, N. Y.

NOW! Just a

converts low cost



Invented and developed by A. E. Staley Mfg. Co., Decatur, Illinois, after years of research—the new High-Temperature Converter affords textile mills new savings, new production efficiencies, new profit opportunities heretofore unattainable. The Converter gives trouble-free operation. Starts and stops itself automatically. Cleans itself after each shut-down without any dilution or change in finished product.

turn of this knob

Pearl Starch to a uniform-viscosity "Thin Boiling" size

Transforms *unmodified* corn starch into the
exact size—with the exact viscosity and stability
... the exact properties and size characteristics you need.

These are but a few of the many advantages you get with this truly
revolutionary new high-temperature converter—developed by Staley's...

More than a mere cooking device, Staley's High-Temperature Converter is a revolutionary, new *system* for making expensive, high quality warp sizes from low cost native, unmodified corn starch.

And it's so easy to operate. Just set the dials and forget it. In just a few minutes, the Converter delivers a *constant supply* of the precise warp size you desire—at a saving of up to 60¢ per cwt. over thin-boiling starch.

What about size quality and performance? The finished warp size possesses high uniformity in solids concentration, viscosity, and degree of conversion. Forms clear, flexible films with noticeably improved adhesion. Affords outstanding viscosity stability with exceptional resistance to breakdown and aging.

How Slasher Performance Is Improved

Thanks to its premium qualities and characteristics—the converted starch makes possible an over-all higher performance at the slasher. Mill performance records show these important advantages:

1. Cuts size preparation time from 2 hours to less than 10 minutes.
2. Faster size preparation permits quicker start-up of slashers.

3. Uniformity of size at size boxes result in greater uniformity of size add-on.
4. Greatly reduced hard-size on boxes and on yarns.
5. Less breaking, less ends out of lease.
6. Less scum in size boxes.
7. Smoother sized yarns.

How Weave Room Efficiency Is Increased

The converted starch gives top performance in the weave room where its improved yarn sizing produces increases in weaving efficiency with averages of from 1½% to 2½%. Here are some of the specific advantages you get:

1. Loom stops substantially reduced.
2. Reduction of hard-size streaks.
3. Reduces number of stuck ends.
4. Greater ease of drawing-in.
5. Relative humidity in weave room is less critical.
6. Marked reduction in seconds.

This is but part of the story. For complete information on Staley's High Temperature Converter and how it can cut sizing costs, improve slashing performance and increase weaving efficiency in your operation—see your Staley Representative, or write:



A. E. STALEY MFG. CO., Decatur, Illinois

Branch Offices: Atlanta • Boston • Chicago • Cleveland • Kansas City
New York • Philadelphia • San Francisco • St. Louis

It is not a matter of chance that the wheels of progress continue to turn at Cone Mills. More than twelve thousand employees with textile manufacturing "know-how" combine their skills in a continuing effort to produce better fabrics today than were produced yesterday. In this way the quality that is needed to keep the wheels of progress turning is woven into each fabric that bears the name of CONE.

CONE MILLS CORPORATION

"Where fabrics of tomorrow are woven today"

wheels of progress

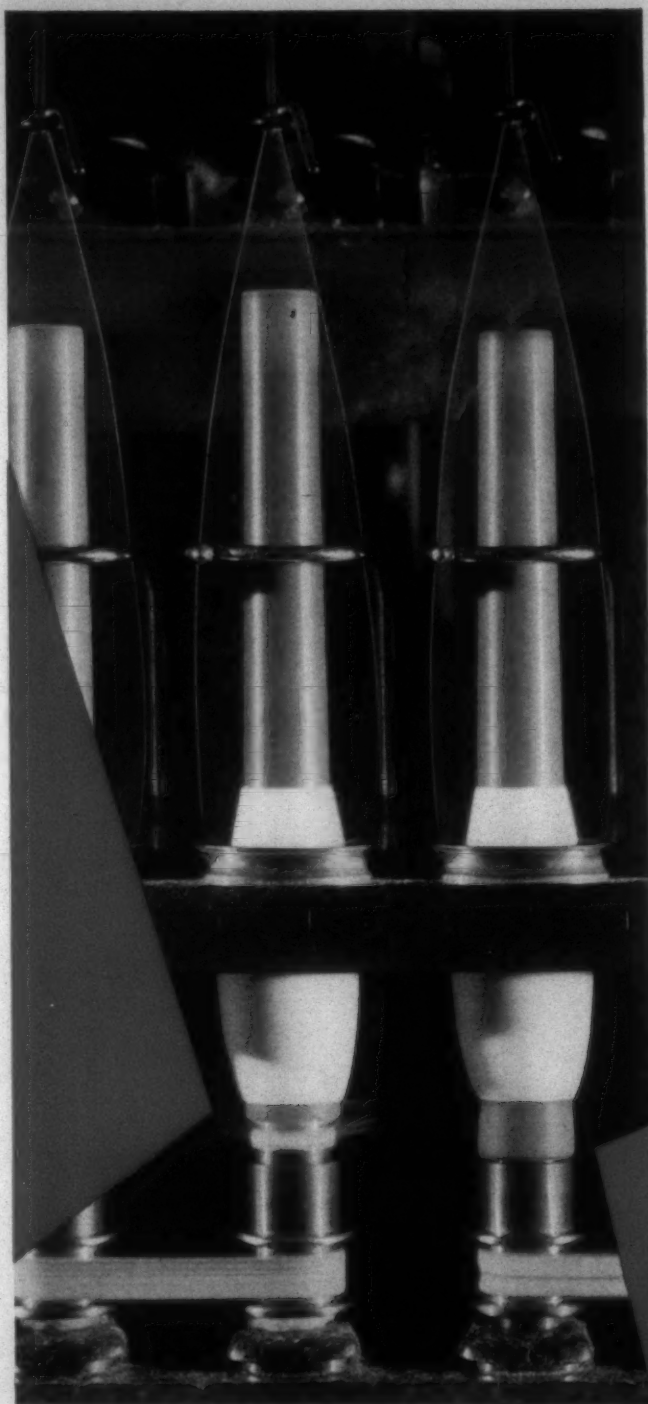


Executive Offices: GREENSBORO, N. C. • Selling Organization: CONE MILLS, INC., 1440 Broadway, New York City

Visit our Booths #661-662
at ATMA, Atlantic City

IMPREGNATED RING SPINNING TUBES

Uniform tube fit,
therefore
no unnecessary
loss of yarn



WRONG

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Charlotte, N. C.

Sub-Agents for Canada:
CROWTHER LIMITED
212-214 Victoria Ave.
Westmount, Montreal, P. Q.

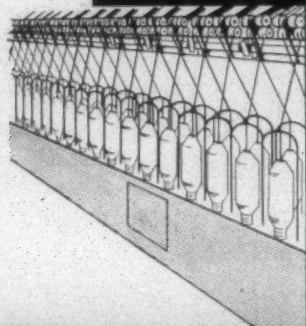


ROVEMATIC

an entirely new concept in spindle and flyer arrangement*. The unique design does away with heavy traversing carriage, carriage lifter mechanisms, counter balance weight and horse-head drive.

*U.S. Patent No. 2,898,729

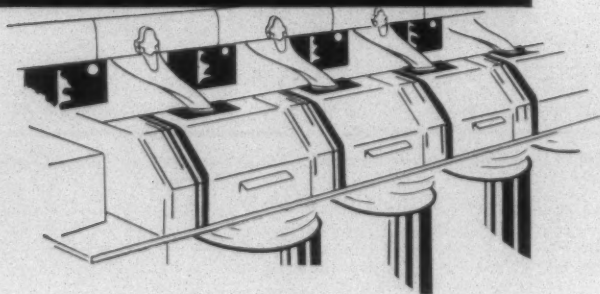
*Other patents pending



VERSA-MATIC

AUTOMATIC DRAFT CONTROL* produces most uniform sliver ever obtained by means of electronically controlled drafting. Yarn produced from Saco-Lowell/Uster Versamatic ADC drawn sliver has highest strength, exceptional evenness and unsurpassed quality. *In the case of combed stock, only one drawing process is required instead of two.*

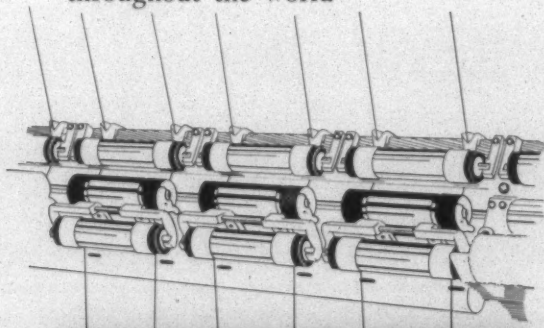
*Patented with other patents pending



See these and other new
Saco-Lowell machinery developments
at the A.T.M.A. Exhibition, Atlantic City,
May 23-27, Booth 482

Only SACO-LOWELL has these exclusive, new machines

Continued proof that
Saco-Lowell sets the pace
for the textile industry
throughout the world



New Model

MAGNEDRAFT*

uses forces of magnetic attraction to produce required roll pressures. Eliminates anti-friction top and bottom rolls and all conventional weighting apparatus. New front top roll support allows quick "end-around" piecing. Requires no lubrication in drafting zone. Gives cleanest, most efficient operation of any spinning drafting element ever developed.

*U.S. Patent No. 2,686,940



Saco-Lowell Textile Machinery Division SACO-LOWELL SHOPS

Executive and Sales Offices: EASLEY, SOUTH CAROLINA

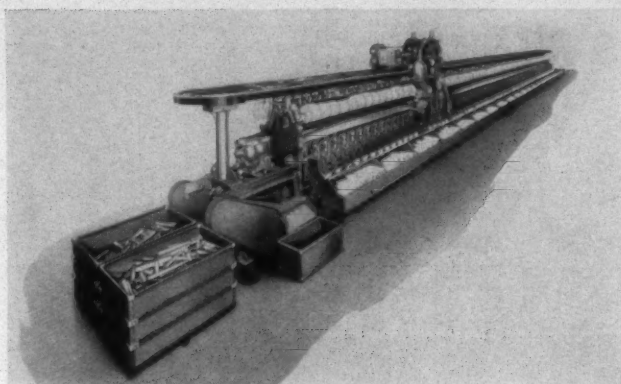
Branch Sales Offices: ATLANTA, GA., CHARLOTTE & GREENSBORO, N. C., GREENVILLE, S. C., SACO, ME.

**BE SURE
TO SEE...**



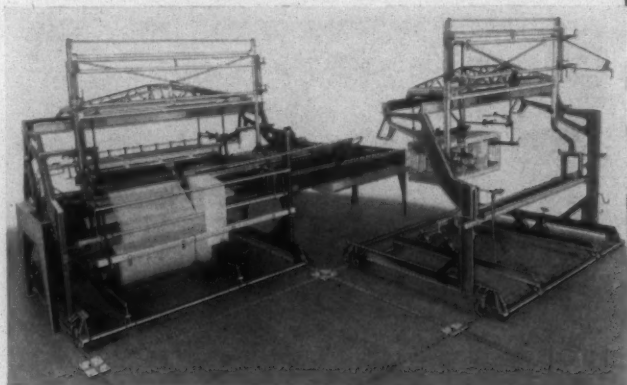
AMERICAN
TEXTILE MACHINERY
EXHIBITION
**ATLANTIC
CITY**
NEW JERSEY
MAY 23-27, 1960

**SPACES
112-114
434-465**



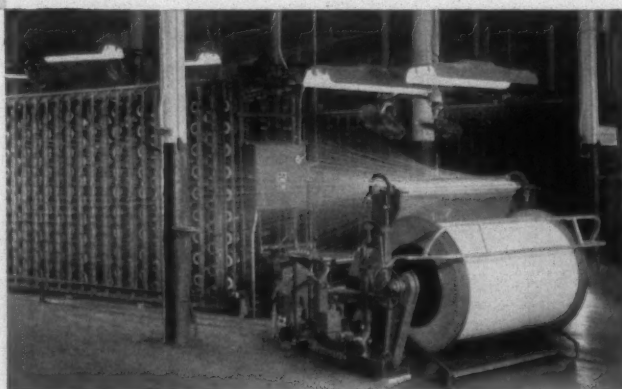
LARGE-PACKAGE SUPER-SPEED WARPERS

The companion machine to the Type "F" Spooler is an improved Super-Speed Warper and Creel. The creel is arranged to take the large 6½ lb. cheeses, the warper will wind larger beams than previous models. In addition, automatic power mechanisms built into the warper enable the doffer to handle the beam from warper to floor or truck with minimum effort.



NEW TYPE "F" AUTOMATIC SPOOLER

Increased capacity in the new Type "F" Spooler permits spooling of cheeses and cones up to 6½ lbs. weight from bobbins up to 12¼" long. New features include redesigned bobbin pockets, skewers, winding drums, cheese arms, and snick plates — and the addition of a tailings sorter, tape breaker, and other optional mechanisms. As always, "Every Knot is a True Weaver's Knot."



VERSATILE WARP-DRAWING MACHINE

Improved models of the familiar Barber-Colman Warp Drawing Machine now handle an even greater variety of warps, drawing them accurately from flat sheet, one-and-one lease, or double beams. The pattern-controlled mechanism automatically selects the correct thread eyes for each end, in loom combinations of as many as 26 harness, 6 banks of drop wires, and a reed.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

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**TUMBLE
DRYING**



**PERMANENT
PLEATING**



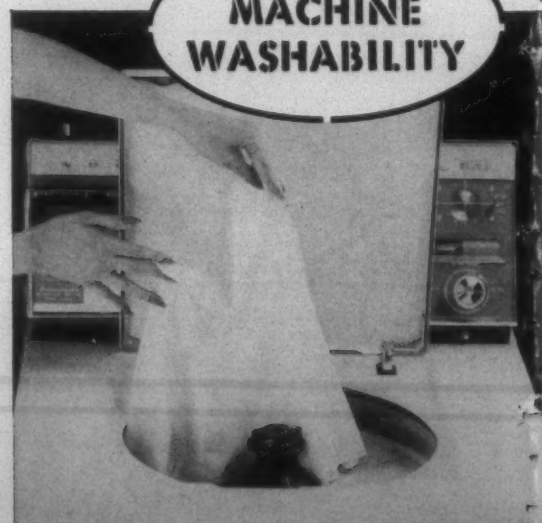
*This is the official Arnel symbol—evidence that this fabric of this new triacetate fiber has been pre-tested for performance claimed.

ARNEL'S "STAMPS" OF CONSUMER APPROVAL

**QUICK
DRYING**



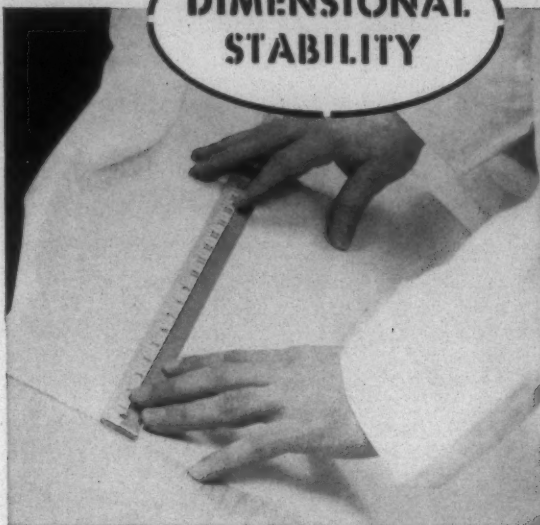
**MACHINE
WASHABILITY**



WRINKLE RESISTANCE



DIMENSIONAL STABILITY



Separately . . . and in combination . . . these "stamps" of approval are working for you in the consumer market just as successfully as you work with Arnel triacetate in the mill.

You accept Arnel for its running efficiency and processing flexibility. The consumer accepts it not only for its beauty but for its ease-of-care and styling versatility. Here you see just eight

of the "reasons-why" for its acceptance.

Let Celanese work with you to develop new Arnel fabrics. Booklets 12A, 13A and 14A, containing the important technical procedure and facts about Arnel, are available by writing Celanese Fibers Company, a division of Celanese Corporation of America, Box 1414, Charlotte, North Carolina.

Celanese® Arnel®

DISTRICT SALES OFFICES: 180 Madison Ave., New York 16, N. Y.; 15 N. Broadway, Des Plaines, Ill.; Western Merchandise Mart, Room 478, San Francisco, Calif.; P. O. Box 1414, Charlotte 1, N. C.; 200 Boylston St., Chestnut Hill 67, Mass.; 3130 Maple Drive N. E., Atlanta 5, Ga.

EXPORT SALES: Amcel Co., Inc. and Pan Amcel Co., Inc., 180 Madison Ave., New York 16, N. Y.

IN CANADA: Chemcell Fibres Limited, 1600 Dorchester Street West, Montreal, Quebec.

Arnel... a *Celanese* contemporary fiber

IRONING— NO PROBLEM



FABRIC TESTING

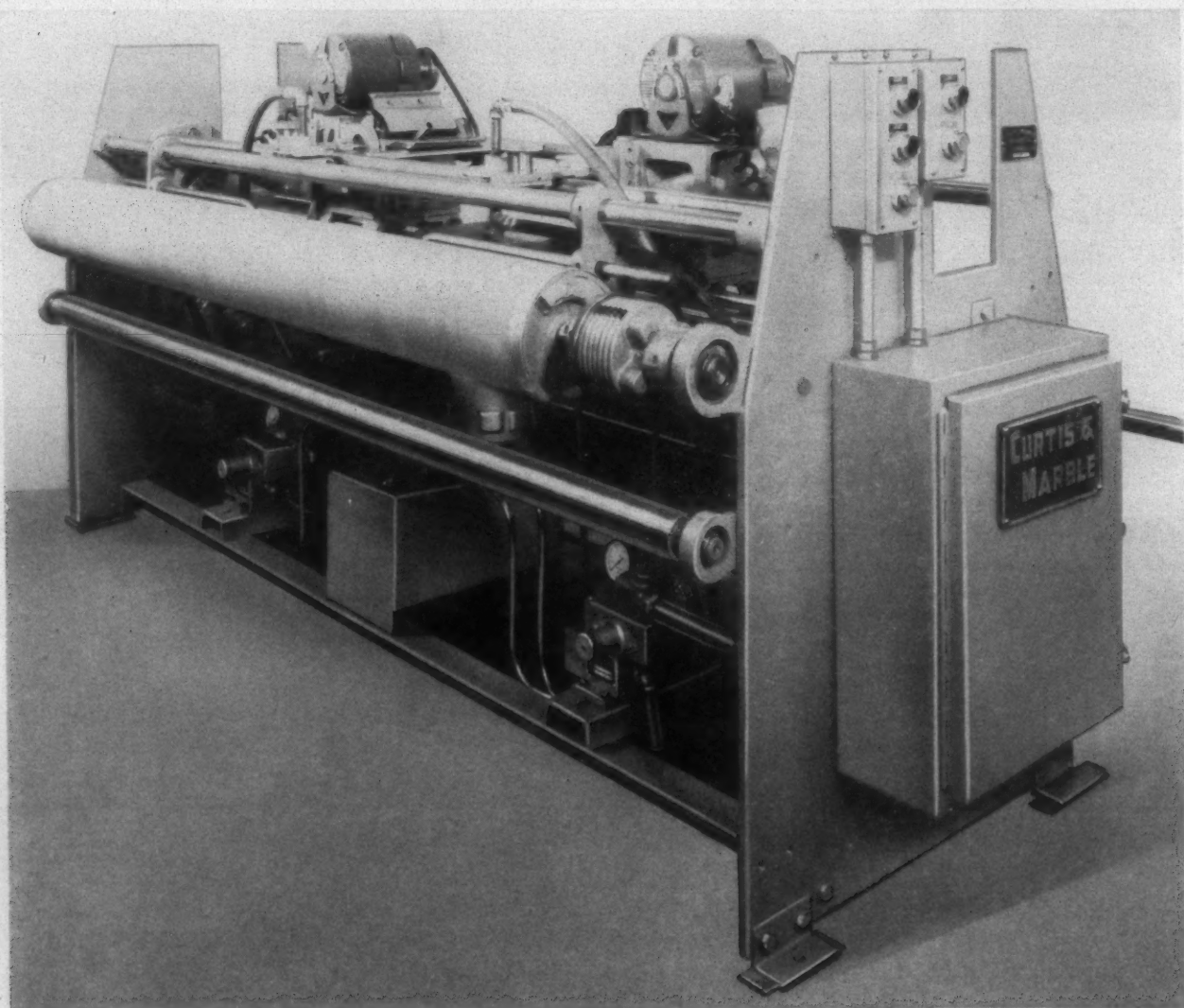


THE NEW SL SELVAGE SHEAR

Here's the new high speed precision machine for shearing either one or both selvages of your fabrics. Mill tested, it handles all types of fabrics, as well as fabrics woven on the new Draper shuttleless loom.

Operation is by compressed air with a hydraulic cylinder. Cloth guiding is positively controlled at all times. Handles 14" to 120" width from light weight gauze to heavy denims, terry toweling and blankets from 60 to 110 YPM, depending on the type of fabric. A bulletin describing this SL Selvage Shear is yours for the asking.

IN OPERATION AT A.T.M.A. EXHIBITION AT ATLANTIC CITY • BOOTH 157



CURTIS & MARBLE MACHINE CO.

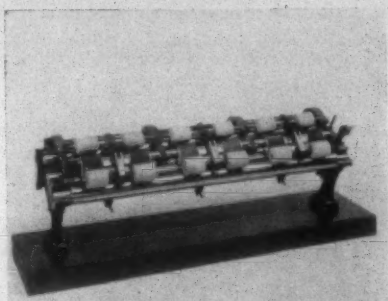
72 CAMBRIDGE STREET • WORCESTER 3 • MASSACHUSETTS
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HEADQUARTERS FOR FINE CLOTH FINISHING MACHINERY SINCE 1831

For The Textile Industry's Use

— NEW MACHINERY, EQUIPMENT AND SUPPLIES —

Top Roll Weighting



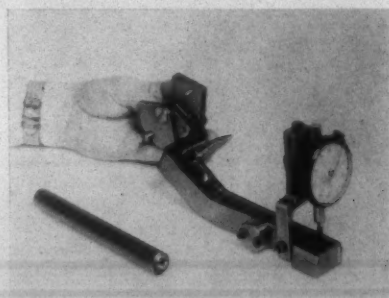
The Dixon Tension Weighting as installed on 2-apron ZDR drafting, a changeover from Z drafting to accommodate staples from cotton up to 3½-inch synthetics. The completely clear roller beam is simple to keep clean.

Dixon Corp., Bristol, R. I., has introduced a new method of applying top roll pressure which it calls Tension Weighting.

Some of the features claimed for the new system are:

- (1) Has a 100 lb. pressure range, starting from any minimum pressure specified.
- (2) Change in pressure is simple, extremely accurate, and easy to accomplish.
- (3) Pressure settings are permanent and tamper-proof.
- (4) Accurate and sensitive measurements of pressure can be made within 60 seconds, using Tension Meter.
- (5) No roller beam attachments assures complete cleanliness.
- (6) An automatic top roll weight increase occurs only when roll laps up, thus assuring even performance for companion boss, not lapped up.
- (7) Adaptable to nearly every type of drafting system, whether top arm suspension type or cap bar type.
- (8) Ingenious releasing tool assures elimination of tampering from unauthorized persons.

Instead of springs, weights, levers or magnets, Dixon uses a tension bar, which exerts pressure through deflection. The de-



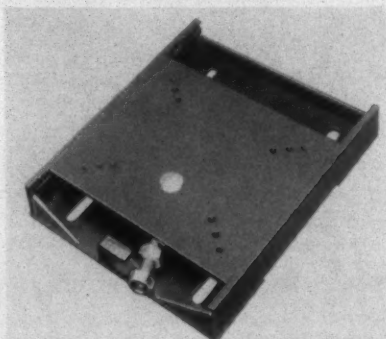
A close-up of the Tension Meter (right) used for checking weight applied to top rolls, and release handle (left) in closed position.

flection can be controlled, thus allowing an adjustment of pressure applied. Releasing is said to be accomplished in three seconds with a special releasing tool issued only to authorized personnel. As the roller beam is completely clear, the system is clean and allows for full efficiency of overhead cleaning.

Top roll weights can be easily and simply changed without buying additional parts. Further, they can be checked easily and accurately from spindle to spindle or from year to year. The system can be applied to almost every type of drafting. Dixon reports.

(Request Item No. E-1)

Pancake Motor Base



For use in variable-speed sheave installations where space is at a premium, sliding motor bases of the low pancake type have been developed by T. B. Wood's Sons Co., Chambersburg, Pa. Provision is made for rapid release of the adjusting screw. The motor base can be moved quickly and easily to shorten center-to-center distance and free V-belts from the grooves for sheave adjustment.

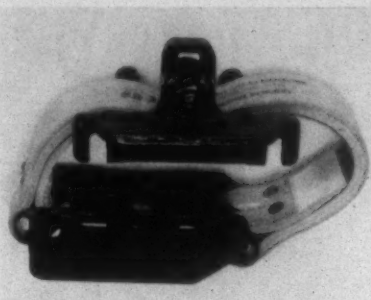
The new Quick-Slide bases are only 1½ or 1¾" in height, depending on N.E.M.A. motor frame number. Amount of movement is either 4½ or 6", depending on N.E.M.A. motor frame number. Bases with 9" movement can be furnished on special order. The top plate of the motor base is drilled to accommodate various combinations of N.E.M.A. frames.

Quick-Slide bases may be used with any V-belt drives but are particularly designed for use with variable-speed drives where it is necessary to vary the center distance between sheaves with pitch-diameter changes.

(Request Item No. E-2)

Checking Device

Slip-Not Belting Corp., Kingsport, Tenn., has introduced a new checking device called Nucheck. The device is said to run looms faster, longer and to box better with less



power. Because of its simple design, with no extra parts, initial cost of the Nucheck is said to be lower. Nucheck has no holes to wear out.

Its free-pivoting action is said to eliminate start-up problems and breakage. In addition, a single wrench is all that is needed to attach the Nucheck to X, X-2, XD, XL, S-5, S-6 and many other looms, according to the company. Made of the finest hair leather, Nucheck is available with an all-leather strap or in leather-fabric combination straps.

(Request Item No. E-3)

Worsted And Synthetic Preparatory Unit

A new electronically controlled unit designed to bring a new level of quality to the production of worsted and long fiber synthetic yarns and cloth has been introduced by the Roberts Co., Sanford, N. C. The new machine, called the Roberts-Tematex AutoEvener, uses electronic means to automatically even to within ± 1% the weight of fibers fed into it, from an entering weight which may vary as much as ± 20%.

This close control of fiber and yarn weight provides a 2000% correction and holds the promise of substantially lowered manufacturing costs, according to Roberts.

The AutoEvener is one of a new line of worsted system preparatory machines being introduced by Roberts in affiliation with the Tematex Co. of Milan, Italy. They will be shown for the first time at the American Textile Machinery Association exhibition. Others in the line are ParaDrafters and ParaBlenders, to be sold under the Roberts-Tematex name. These are machines for parallelizing, drafting and blending worsted and other long fibers in preliminary yarn processing operations.

The exceptional control of weight evenness translates into greatly increased strength of sliver and ultimately yarn, with an accompanying marked increase in quality and evenness, according to the company, and at the same time serves to eliminate certain preparatory operations while greatly speeding production of yarns at lowered costs.

Yarn evenness, Roberts points out, shows up in improved fabric quality, better

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P. O. Box 101 Phone SH 2-1428
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FOR THE TEXTILE INDUSTRY'S USE—



This new Roberts-Tematex AutoEvener is an electronically controlled worsted yarn system preparatory machine that is said to even within $\pm 1\%$ the weight of fibers fed into it. The entering fibers may vary as much as $\pm 20\%$.

acceptance of dyes and finishes, and increased wearability.

The AutoEvener is said to be capable of correcting for both short and long term variations, meaning that the yarns making up the fabric are correctly even inch to inch and not alone yard to yard. This means that there will be no thick and thin wear places in the fabric, providing for uniformity of dyeing and longer fabric life.

The new machine consists fundamentally of three main components: a measuring unit, a delaying unit and a variation unit. The measuring unit detects and measures every variation or irregularity in the ingoing sliver, transmitting this information to a delaying unit which keeps an exact and continuous record of weight variations. In the time it takes for the ingoing sliver to cover the distance between the measuring unit and the drafting zone, weight variations recorded in the electrical-mechanical memory or delaying unit are transformed into electrical variations and then into speed variations of the feed unit to correct irregularities and to maintain a constant weight of the delivered sliver.

The variation unit consists of an auxiliary motor, among other parts, that is always kept rotating, providing instantaneous inversion of the motion when the weight variation is transformed from positive to negative, and permitting the proper mechanical ratio for correction.

(Request Item No. E-4)

Polyester Dyes

Three new disperse dyes have been developed by the dyestuff and chemical division, General Aniline & Film Corp., New York City. Two brochures recently issued contain illustrative fabric swatches and discuss working and fastness properties of the dyes.

Genacron Blue 3R and Genacron Violet

BN, described in Circular No. G-808, are said to offer related violet-blue shades in the company's special Genacron range of disperse dyes, recommended primarily for dyeing polyester fibers. The two products are said to feature high color value, excellent buildup, and fastness to light, washing, perspiration, and hot pressing. The dyes are particularly well suited for deep blue and navy shades on dress goods and suitings, the company reports.

Genacron Blue 3R is said to yield bright reddish blue shades on polyester fibers, for self-shade dyeing or as an economical base or shading color for fast blue and navy tones in all practical shade depths.

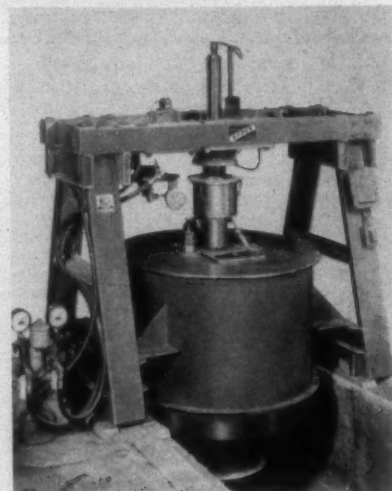
Genacron Violet BN dyes a bluish violet hue, has properties similar to those of its companion product, and serves equally well as a base or shading dye.

The third new color, Genacron Blue GGL, described in Circular No. G-809, is said to dye an attractive, greenish blue shade on polyester fibers. The dye is described as highly suited for this purpose, exhibiting strong tinctorial value and buildup, very good stability to sublimation, and excellent fastness to light, washing and perspiration. High heat stability permits dyeing by pressure or pad-heat curing methods as well as by carrier application. The shade is said to be especially useful for dyeing medium to heavy shades of blue, green, or navy for wearing apparel fabrics.

The new dyes are supplied as fine dispersible powders. Application of the dyes can be made by all conventional methods to stock, yarns, or piece goods of straight polyester fiber or blends containing wool, cotton or viscose rayon.

(Request Item No. E-5)

Centrifugal Dryer



A new centrifugal dryer, the Hypar Model SCD has been developed by American Tool & Machine Co., Boston, Mass. The unit eliminates the discharger—which also means elimination of major expense and maintenance items that are serious accident hazards, according to the company. Further, it is said to eliminate possible damage to centrifugal screens and linings and also breakage and pulverization of crystalline products.

American Tool's new centrifugal dryer

AUTOMATION!

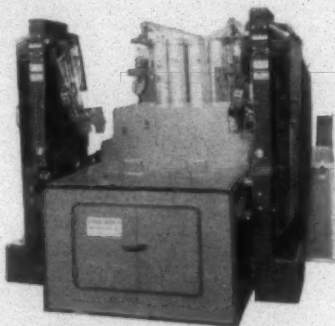
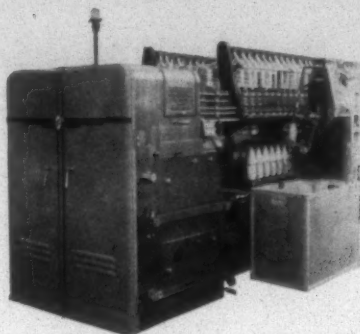
DRAWING THROUGH SPINNING

THE OM-S SPINNING FRAME Eliminates Roving Completely

See these Machines in Action
At The
American Textile Machinery Exhibition
Atlantic City, May 23-27, 1960
Booth No. 931 (Lower Level)

This latest model costs less than a conventional frame, but produces a more even and stronger yarn directly from drawing sliver. It accommodates cotton and other staples up to 3" in length, spins them into any yarn count from 5's to 120's. Notable innovations include automatic spindle speed regulation; automatic stop and rail lowering motion (with doffing pilot lamp); and increased can and bobbin capacity. More than 1,000,000 spindles in use, including more than 10 installations in the U. S. A. Installed and serviced by reputable erectors in North America.

Head End of OM-S Spinning Frame
with Auto-Doffer in action.



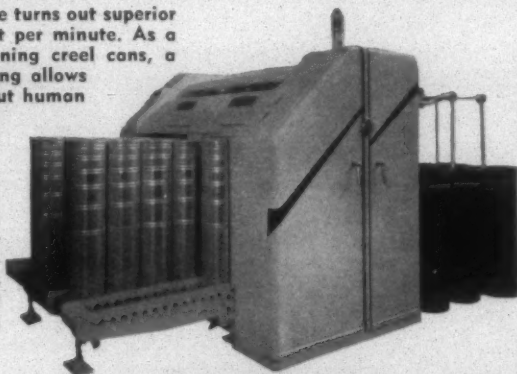
Permanently Mounted Auto-Doffer,
with Dual Heads.
(Portable models also available.)

THE AUTO-DOFFER Eliminates Hand-Doffing Completely

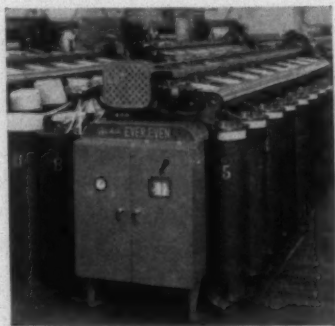
Here, for the first time in this country, is a completely perfected doffing device that totally eliminates the expensive and tedious hand operation of doffing full bobbins and replacing empty ones on spinning or twister frames. Equipped with dual doffing head, travelling along both sides simultaneously up to 25 feet per minute, it can completely doff a full-length frame in less than two minutes! Efficiency, in terms of ends down after doffing, increased as much as 50%.

THE O-M HIGH SPEED DRAWING FRAME Accelerates Sliver Production

New to North America, this machine turns out superior sliver at speeds exceeding 400 feet per minute. As a packaging machine for OM-S spinning creel cans, a new system of automatic can doffing allows for many cans to be handled without human attention. Empty cans are fed into each delivery and full cans are moved away on separate conveyors. Other new features include an improved drafting system, revolutionary suction clearers on all top and bottom rollers, power driven sliver lifting creels, 3 sets of stop motions with separate pilot lamps to pinpoint source of stoppage, and improved systems of sliver cutting and coiling.



O-M High Speed Drawing Frame
with New Automatic Can Changing.



Ever-Even Control Box with Recorder.
(Mounted on Conventional
Drawing Frame.)

THE EVER-EVEN Controls Sliver Variables Continuously

Also new to North America, this automatic feedback control, for drawing frames and pin drafters, continuously measures and integrates the sliver from each delivery and feeds back the results to instantaneously correct the draft in case of unevenness. Evenness measurements, machine stops, and their duration are recorded on charts, so that the quality, efficiency, and production of each machine can be readily determined at any time. Short term variation is substantially reduced and long term variation is practically eliminated, with no gear changing.

In addition we offer a full line of auxiliary spinning equipment and supplies.

Address All Inquiries To:

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OLYMPIA BLDG., NEW BEDFORD, MASS.

Representing in North America:—Mitsui & Co., Ltd., (Exporters-Importers)

Tokyo, New York, etc.

O-M Spinning Machine Manufacturing Co., Ltd.

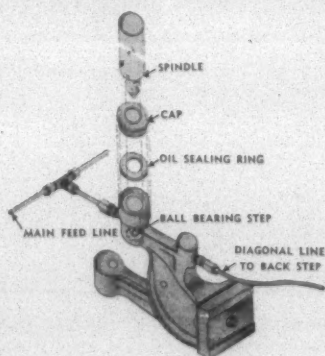
Osaka, Japan

ELIMINATE TANGLED ROVING 90%

With
Pressure Lubrication,
Ball-Bearing Step,

you can increase
your spindle speed,
over the
manufacturer's
recommendation,
on a 12x7 slubber,
146 r.p.m., using
50% combermoil
and 50% strict low
middling cotton,
1.45 x square root
of hank roving.

Saves H. P., oil and Labor
Improves quality
No steps to replace
No spindles to be repointed
Increases production
12½ %
Increases spun roving 20 %



**HAMILTON
& SONS
MACHINE &
MANUFACTURING
CO., Inc.**

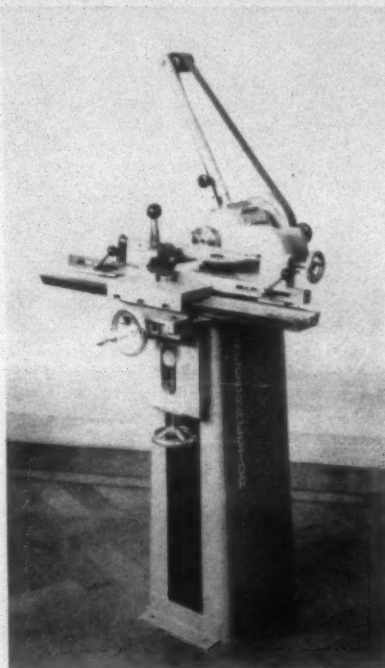
Hannah Picket Ave.
East Rockingham, N. C.

FOR THE TEXTILE INDUSTRY'S USE—

can be loaded standing still or rotating slowly, as required. Automatic discharge of bulkier solids is faster and easier because bottom opens to full inside diameter of basket. The Hypar Model SCD is now currently being used for textile reclamation.

(Request Item No. E-6)

Shuttle Truing Machine



What is said to be a new, low cost universal truing, tip grinding-polishing machine, has been developed by Lignostone Fabriek, Ter Apel, Holland, and is being sold in the U. S. by Lignostone Department of Techno Exports, New York, N. Y.

Designed for faster set-up between centers, the unit is said to accurately and smoothly true fibre-clad or plastic shuttles from the smallest up to $23\frac{3}{8} \times 2\frac{3}{8} \times 2\frac{3}{8}$ ". A shuttle bottom support bar prevents chattering and can be set to any height and depth and any required angle through a Vernier scale.

The cutter head, driven directly by a $\frac{3}{4}$ h.p., 3400 r.p.m. motor, has removable cutter blades and will also hold carbide tipped blade and drills or router bits for cutting shuttle slots or grooves. While cross feed or vertical adjustments are made by handles, fast truing cuts are made by a hand-operated free slide compound.

The shuttle tip grinding-polishing section of the machine is said to permit faster grinding by an inexperienced operator. Two gear box driven rubber friction rollers spin the shuttle against an abrasive belt that runs in opposite direction. The belt disc rotates at 3,400 r.p.m. directly from the motor and the space to rollers is adjustable for different-size shuttles. Shuttle points are smoothed by inserting the point between the rollers and belt and exerting light pressure with a hollow hand center on the opposite tip while making a back and forth swinging motion. The centering and tension of belt

is adjusted on the belt-pulley extension arm. The machine is self-lubricated.

(Request Item No. E-7)

Yellow Vat Dye

Sandothrene Golden Yellow NRK Double Paste Ultrasperse is the latest release in the line of vat dyes produced by Sandoz Inc., New York City. It is recommended for pad-steam, Williams unit, package, and pigment pad-jig methods, and may also be printed by flash and conventional ageing methods. It is said to have good wash-fastness in all depths. Good lightfastness in medium to dark depths makes it particularly desirable for drapery applications, and its fastness to peroxide is ideal for use on yarn which is to be bleached. It is level dyeing, non-migrating, and shows a minimum of shade change, with no loss of lightfastness when given the appropriate resin and catalyst aftertreatment, Sandoz reports.

(Request Item No. E-8)

Brush Roll Cleaner

The Bar-Plate Mfg. Co., Orange, Conn., has developed a machine for cleaning brush rolls for gravure presses. Called the Bar-Plate gravure brush roll washing machine, the unit will be manufactured in sizes to suit the various gravure presses in the field. All units will be equipped with two brush rolls and two solid aluminum rolls to handle three gravure brush rolls at the same time. Standard equipment will include explosion proof motors and electrical equipment in order to safely handle the ketone solvent in use in the cleaning operation. All rolls are located within $\frac{1}{2}$ " of the bottom of the tank to reduce the amount of solvent necessary for the cleaning operation. The entire construction of the unit is stainless steel with fittings of aluminum or stainless steel.

(Request Item No. E-9)

High Speed Balances



A new line of general purpose high-speed precision balances, designed for small capacity industrial weighing operations, has



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Automatic tube trimmer; Sonoco-designed, Sonoco-built.

Specialized machinery for precision products!

Sonoco designs and builds most of its highly specialized production machinery in its own shops. In the past 60 years, Sonoco engineering accomplishments have included efficient cone and tube machines and countless other exclusive technical developments. As a result, the quality of Sonoco cones, tubes, cores and spools has shown a *pronounced improvement* throughout the years. And, as new developments take place in the textile industry, Sonoco builds new equipment to manufacture

products for use in these processes and methods—products which meet customer requirements.

Sonoco has more than half a century experience in producing all types of paper textile carriers. Completely integrated manufacturing facilities assure close quality control. *Only Sonoco*, in its field, provides the necessary knowledge, skill and capacity to meet the ever-changing techniques of the textile industry. Let Sonoco experience help you!

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WATSON-WILLIAMS



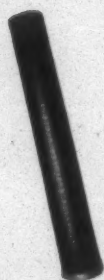
NEW

WEAVE-ever Shuttle

Made full thickness of resin impregnated and laminated fabric, for long life and extra rugged service.

Bring your shuttle knowledge up-to-date at Booths 672-675, the week of May 23rd. Watson-Williams whole family of shuttles will be on hand.

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MFG. CO.**

MILLBURY, MASS.

Representatives: Howard S. Pellatt, 4 Branch Avenue, Saylesville, R. I.; Sutton M. Ebert, Box 7143, Elkins Park, Philadelphia, Pa.; Watson & Desmond, Inc. Box 1954, Charlotte, N. C.; John Wyatt and Ralph Patton, Box 701, Greensboro, N. C.; Ray A. Norman, Box Drawer 779, Greenville, S. C.

FOR THE TEXTILE INDUSTRY'S USE—

been developed by The Exact Weight Scale Co., Columbus, Ohio.

Series K balances are said to be ruggedly constructed and easy to operate, requiring no special instruction. To minimize operator error, weight readings are indicated with a sharp, shadow-edge light projection on a large, direct-reading, illuminated dial. The unobstructed weighing pan, available in a variety of stainless steel and plastic designs, is located on top of the instrument for additional operator convenience.

Utilizing the principle of weight by substitution, high accuracies are said to be obtained by positioning the built-in mechanical weights on the beam by merely dialing the desired weight. A fast-acting magnetic damping device speeds the weighing operation.

Provision is made on all models for weighing samples on commodity pans suspended below the balance. This procedure is recommended for work involving corrosive, poisonous, other dangerous substances in protective compartments, as well as for weight determinations in heating or drying ovens.

For additional convenience, a built-in taring device can be supplied to allow for deducting the weight of empty containers from the gross weight. Thus the contents can be weighed directly. Tare is controlled with a knob located on the side of the instrument.

Three capacity balances are available—800 grams with 1/10-gram graduations; 2,000 grams with 1-gram graduations; and 4,000 grams with 1-gram graduations. Dials reading in pounds, grains or pennyweights are also available.

(Request Item No. E-10)

Fiber Reactive Dyes

Sandoz Inc., New York City, has announced the addition of a further range to its Drimarene fiber reactive dyes for printing cellulosic fibers. The new colors are designated as Drimarene-Y dyes and are for application by the padding process.

They are said to offer excellent stability of the padding liquor and high solubility in addition to the distinctive properties of the reactive class. The danger of tailing is said to be virtually eliminated since the time of immersion and the padding temperature have no influence on the dyeing owing to the low substantivity of the new range.

Migration effects do not arise when care is taken to obtain even intermediate drying, Sandoz reports. Good stability to steam heat is said to permit economical fixation by the one-bath steam or dry heat processes.

According to Sandoz, complete and easy removal of the unfixed portion of the dye-stuff by washing makes this step simple and insures that full wet fastness is obtained.

The wide possibilities of combination, stability to steam and heat, easy washing off and excellent stability of padding liquors together are said to provide the further advantage of excellent reproducibility of shade.

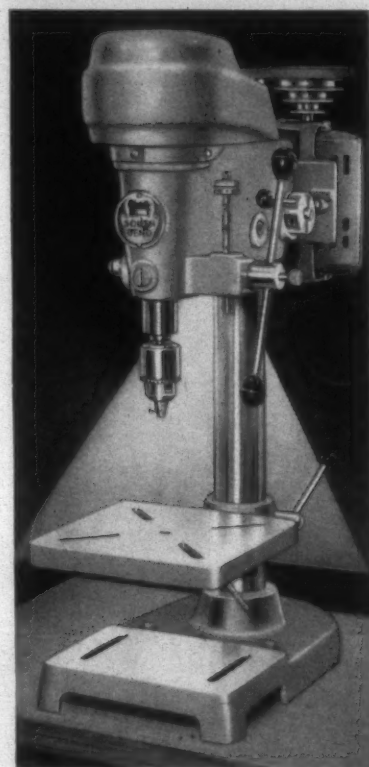
Drimarene-Y colors form stable chemical

linkage with the fiber to give high fastness to wet treatments and shades of unusual purity and brilliance, Sandoz reports.

At present the line is comprised of: Yellow Y-4GL; Orange Y-G; Scarlet Y-GL; Red Y-RL; Red Y-2B; Violet Y-RL; Blue Y-RL; Blue Y-GL; Turquoise Y-G; Navy Y-BL; Grey Y-GL; and Black Y-BL.

(Request Item No. E-11)

Lathe Depth Gage



South Bend Lathe Inc., South Bend, Ind., has developed a new rack type depth gage that is said to overcome spindle deflection in 12 to 18" drill presses which results from depth gage pressure. This is said to be a common cause of inaccuracies in 12 to 18" drill presses.

This new feature controls the linear travel of the quill by limiting the angular rotation of the quill feed shaft. No depth gage roller is used on the quill. The pressure on the depth gage nut cannot exert lateral pressure on the spindle as is the case when a depth gage collar is used, the company reports.

This new design is also said to permit closer control of drilling depths as the depth gage nut is graduated in .001" of travel. The tension on the quill feed is adjustable, and can be completely released when extreme feed sensitivity is required on exacting work by means of an adjustable friction shoe.

(Request Item No. E-12)

Softening Agent

The Crest Chemical Corp., Newark, N. J., has developed a new highly concentrated nonionic softening agent called Crestosoft AS Conc. This softener is reported to be unusual in that it is absolutely pure white in color. It is used with acids or alkalis



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◀ Traveling Cleaners

BLOWING UNITS

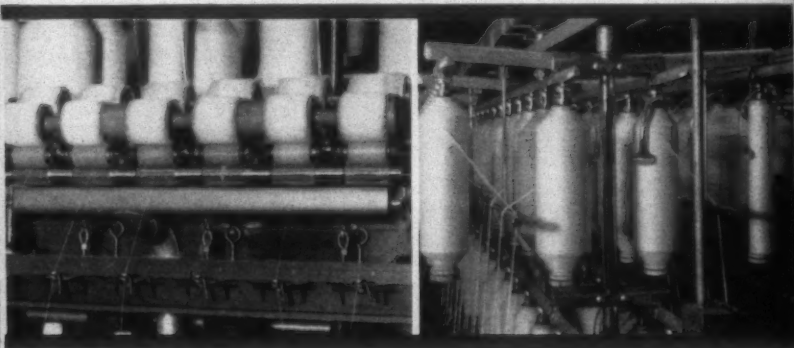
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Atlantic City
Booths 564-573

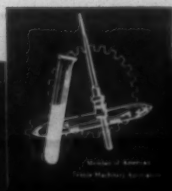
Parks-Cramer Company

FITCHBURG, MASS.

CHARLOTTE, N.C.

ATLANTA, GA.

418



FOR THE TEXTILE INDUSTRY'S USE—

and is said to be compatible to all types of finishes, resins, catalysts and fixatives.

Crestosoft is said to impart a soft hand to all fabrics, to excell for backfilling and top softening. Crest reports that it has no effect on shade of pastel-dyed goods, preserves maximum light fastness, shows no yellowing of white and cannot retain chlorine. It is used with urea-formaldehyde, melamine and cyclic resins to obtain a soft lofty hand with maximum draping qualities. Used with resins, the softener is said to minimize tensile strength loss, add to abra-

sion resistance, to increase tear strength and improve sewability characteristics.

(Request Item No. E-13)

Plated Loom Parts

Textile Wearplates Inc., Charlotte, N. C., has developed a process of wear plating loom parts which is said to make them last over 50 times as long as conventional parts. The process is called Tex-Wear and consists in the insertion of a specially hardened material at the points of wear. The separate pieces are either tipped, inlaid or imbedded so that they become an integral

part of the basic part. This composite design is said to give greater strength, consistent accuracy and longer life than is possible with any one metal. The insert material is said to be almost in the diamond hardness class.

The initial cost of wear plated parts may be slightly higher than conventional parts in some instances, the company said, but this cost is easily made up in reduced downtime of machines, reduced labor maintenance and in improved machine operation.

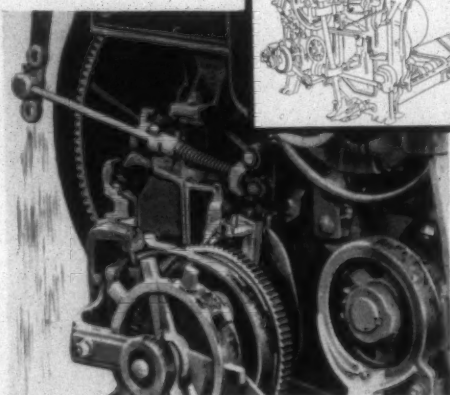
Textile Wearplates reports that it is now manufacturing and stocking most types of thread cutters, protective fingers, pick toe cams, etc. Most other loom parts will be accepted in a new or worn condition for wear plating. (Request Item No. E-14)

NON-FLUID OIL

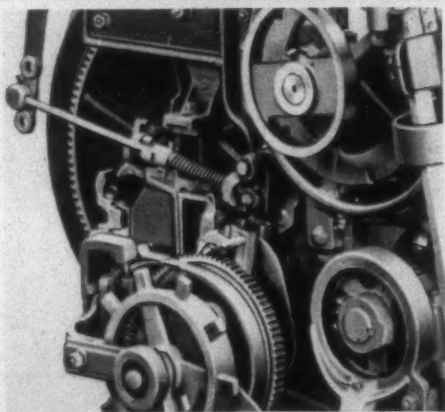
TRADE MARK

REGISTERED

Ordinary oil
drips out,
stains cloth,
soaks floors



Non-Fluid
Oil
stays in
bearings



NON-FLUID stays in bearings.

Ordinary oils and greases drip and spatter onto wraps, woven goods and floors, causing a higher percentage of seconds, higher lubrication costs and an underfoot hazard. NON-FLUID OIL stays in bearings and lubricates dependably until entirely consumed. Bearings run cool and friction-

free. Less lubricant is required, with fewer applications. Production of perfect cloth is increased. Therefore, you save three ways.

Seven out of 10 of the largest mills now use NON-FLUID OIL in their weave rooms. Send for test samples and Bulletin T-20.

NEW YORK & NEW JERSEY LUBRICANT CO.

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WORKS: NEWARK, N. J.

Sou. Dist. Mgr.: Fred W. Phillips, Greenville, S. C.

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Chicago, Ill.

Detroit, Mich.

St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

Red Reactives

Sandoz Inc., New York City, has added two brilliant red dyes in the reactive class to its range of Drimarene-Z dyes for printing cellulosic fibers. Drimarene Scarlet Z-GL and Red Z-RL are said to be very brilliant dyestuffs fully conforming to the standards of the Drimarene-Z range in stability in printing pastes, ease of washing-off, and all other printing and fastness properties.

(Request Item No. E-15)

Portable Moisture Meter

Strandberg Engineering Laboratories Inc., Greensboro, N. C., has introduced a portable moisture meter said to be capable of reading moisture in both natural and synthetic fibers and blends without calibration. Model M-200 Moisture Monitor gives a per cent regain reading when the detector roll is applied to the material. The unit is permanently calibrated from 0.1 to 26% regain. It can be applied to materials in motion, permitting continuous moisture measurements to be made during a production run.

(Request Item No. E-16)

Watts And Vars Recorder

A new, portable hook-on recorder that registers watts and vars on a single strip-chart is now available from General Electric, Schenectady, N. Y. The instrument is designed to give utilities and industrial plants an easy, low-cost means of checking power consumption efficiency, and of obtaining data for power-factor correction.

The Type CF-8 recorder, using an inkless mechanism, taps its two records side by side—watts for 50 seconds and vars for 10 seconds. The phase-shift and time-switching mechanisms that obtain the var measurement are completely self-contained.

Another unique feature, the company reports, is the fact that the recorder can use a type G-4 split-core current transformer that "hooks on" the line, permitting readings to be made without service interruption.

The recorder is expected to provide mills with lower service costs and better accuracies through reduction of human error in making power utilization surveys.

Although a single-phase instrument, the CF-8 recorder can also be used in polyphase



Two Reasons Why the Textile Industry Looks FIRST to "NATIONAL"...

Leadership IN DRYING TECHNOLOGY PROGRESS

During the past forty years, "NATIONAL" research and design engineering have given to the Textile Industry consistently new concepts of drying procedures and equipment. Speed, efficiency and quality in the drying of textiles in all forms—from fibre to finished goods—have been revolutionized due in large measure to the patented features of "NATIONAL" design and construction.

One Source FOR ALL TYPES OF DRYING EQUIPMENT

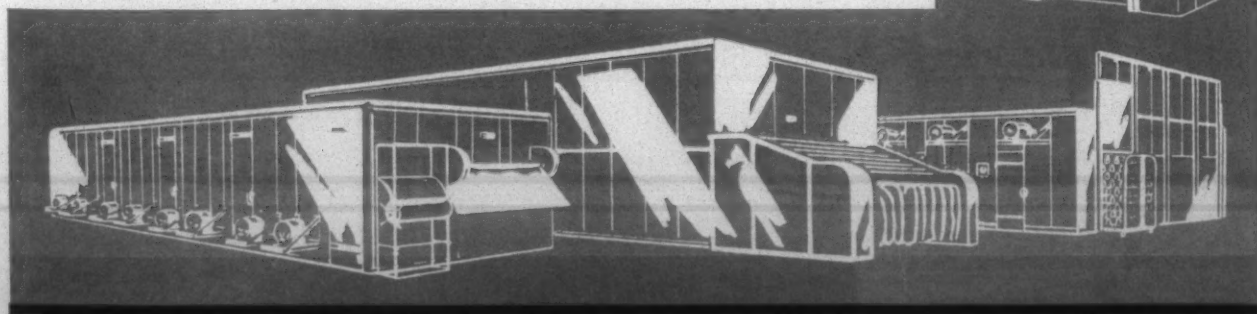
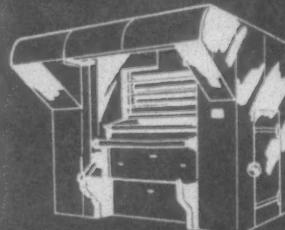
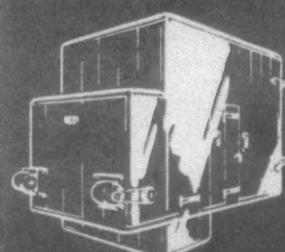
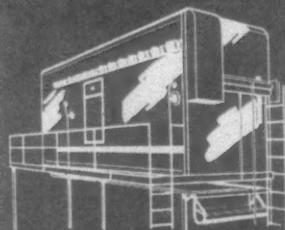
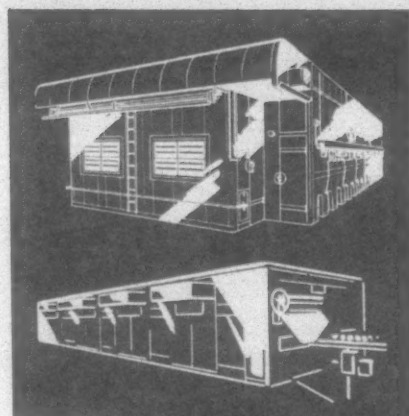
The list of "NATIONAL" dryers and conditioning units covers the full range of the Textile Industry's requirements—Loop, Print Goods, Tenter, Roll, Carpet, Skein, Yarn, Rayon Cake, Package Yarn, Stock and Swatch Dryers; Nylon Heat Setting Machines.

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Exposition BOOTH No. 74-75



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FOR THE TEXTILE INDUSTRY'S USE—

circuits. Balanced 4-wire, 3-phase watts are measured by connecting the instrument into one phase and multiplying the recorded value by three. Balanced 3-wire, 3-phase readings may be obtained by using an external phase-shifting auto-transformer in the potential circuit and multiplying readings by 1.73. (Request Item No. E-17)

Wool Staple Length Recorder

A new wool staple length recorder has been developed by U. S. Testing Co., Hoboken, N. J. The electronic instrument was developed under a marketing research contract with the U.S.D.A. to specifications established by the Market Quality Research Division and the Livestock Division of U.S.D.A.'s Agricultural Marketing Service.

The wool staple length recorder is designed to accurately measure the length of grease wool staples within ± 0.1 ". The results are printed on standard adding machine tape. The recorder is capable of handling staples from 0.2 to 9.9" in length up to a rate of 50/min. for the shorter staples. In addition to printing the individual length, the instrument also registers the total length of a group of staples, and counts the number of staples so the average length can be easily determined. The recorder is said to modernize grading of grease wool staple length and to eliminate human error. (Request Item No. E-18)

Skein Dyeing Machine

A new stainless steel skein dyeing machine for zipper tapes and other narrow fabrics has been developed by Klauder Weldon Giles Machine Co., Philadelphia, Pa. The design of false back and indirect heating coil is said to eliminate snagging of loose tape ends. Both natural and man-made fibers are readily handled by the unit, the company reports.

Skeins are suspended in a relaxed condition between stainless steel dye-sticks. Separate dye and chemical feed system is used, also steam coil for indirect heating of the bath. Instrumentation can be provided to control bath temperatures. The front doors are normally air operated but can be made to suit a customer's requirements. (Request Item No. E-19)

Latex Finishing Agent

B. F. Goodrich Chemical Co., Cleveland, Ohio, has introduced Hycar 2671, a reactive acrylic latex for use as a finishing agent. The latex is said to be usable in such diverse applications as backings for upholstery and drapery fabrics, as a binder for non-woven fabrics and as an adhesive or laminating agent.

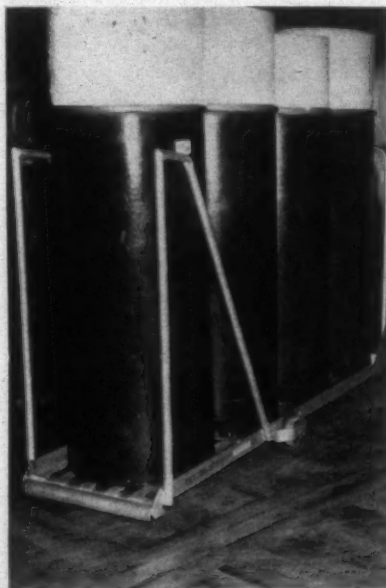
Textile mills using the new latex need only adjust its viscosity in order to back-coat a wide range of fabrics to obtain such desirable characteristics as wash fastness, dry-cleanability, good hand and resistance

to discoloration, Goodrich reports. The resulting decrease in compounding operations is said to result in lower processing costs.

Full scale production of Hycar 2671 may also lead to the expansion of nonwoven fabrics to the outerwear field, according to Goodrich. Producing nonwovens with the new latex gives them properties that make them practical for appeal. It simplifies the compounding, reduces processing costs and increases the stability of nonwovens, the firm reports. More important, the new product solves the problem of nonwoven washability and dry-cleanability that heretofore has kept this type of construction out of the outerwear field, Goodrich says.

Another area where the new product is expected to find wide acceptance is as a fabric adhesive and laminating agent. The possibility of using adhesive materials for assembling apparel has intrigued the garment industry for many years. Early attempts were frustrated because the seams did not hold well, were stiff and discolored the fabric. In field tests, Hycar 2671 is said to have overcome these problems. (Request Item No. E-20)

Card Can Truck



A new card can truck has been patented and licensed for manufacture by Fisher Mfg. Co., Hartwell, Ga. The truck features a conveyor roll on the front for no-strain loading. Tilt type wheels with a swivel on one end allow the units to be turned in its own length. The deck is approximately 2 1/2" from the floor. It is designed for 16" and larger card cans. It is said to be easy to clean and light to transport. The unit has push handles at each end. (Request Item No. E-21)

Pigment Printing Colors

Two new colors for textile pigment printing have been developed by The Hilton-Davis Chemical Co., Cincinnati, Ohio, division of Sterling Drug Inc. The new colors are a brown and an orange. They are being

offered in the company's Hiltone and Seabond printing systems. Hilton is a water-in-oil system, and Seabond an oil-in-wafer system.

The brown gives rich shades, according to Hilton-Davis, and is fast to light, dry cleaning and washing. It can be applied to cotton and synthetic fibers.

The orange pigment is said to have exceptional dry cleaning-fast qualities as well as good light-fastness and wash-fastness. It is also applied to cotton and synthetic fibers. (Request Item No. E-22)

Worsted Spinning Frame

A new 25" narrow spinning frame for the low cost production of worsted and long fiber yarns has been developed by Roberts Co., Sanford, N. C. All ball bearing, the new machine, designated the Arrow WM-1, provides a 25% increase in production speeds, better running of more even yarns at markedly reduced operating costs, and substantial increases in package size, according to Roberts.

First deliveries have begun to J. P. Stevens & Co. on a contract of more than \$650,000, calling for 40 of the new worsted frames totaling more than 10,000 spindles for two Stevens' plants.

The WM-1 is capable of production assignments not generally available for worsted spinning, according to the company. It has been thoroughly evaluated on 100% worsteds, all synthetics, and blends of fibers for yarn counts from single 15's to single 80's. First public showing will be at the American Textile Machinery Exhibition in Atlantic City.

Machine versatility provides for handling the increasing production of synthetic fibers and blends with worsteds with few changes or adjustments, Roberts reports.

Roberts points out that the narrow frame width of the Arrow WM-1 is particularly important since the mill can install five in the same area occupied by four of the traditional frames of 36 and 39" width.

The narrow width is also said to provide for manufacturing economies, contributing, along with design simplicity, to lower prices for the new equipment.

(Request Item No. E-23)

Battery-Powered Fork Truck

A 4,000-lb. capacity electric fork truck has been added to the Clarklift line of battery-powered trucks produced by the industrial truck division of Clark Equipment Co., Battle Creek, Mich.

Named the EC-40, the cushioned-tire, rider-type truck is equipped with carbon pile drive control, which is said to provide constantly smooth acceleration. Working through a hydraulic circuit, carbon pile control permits steady, stepless acceleration for inching operations, where loads must be placed delicately.

High torque, required for fast acceleration, is provided by dual field series windings in the drive motor. Dual fields improve efficiency of operation throughout the entire speed range.

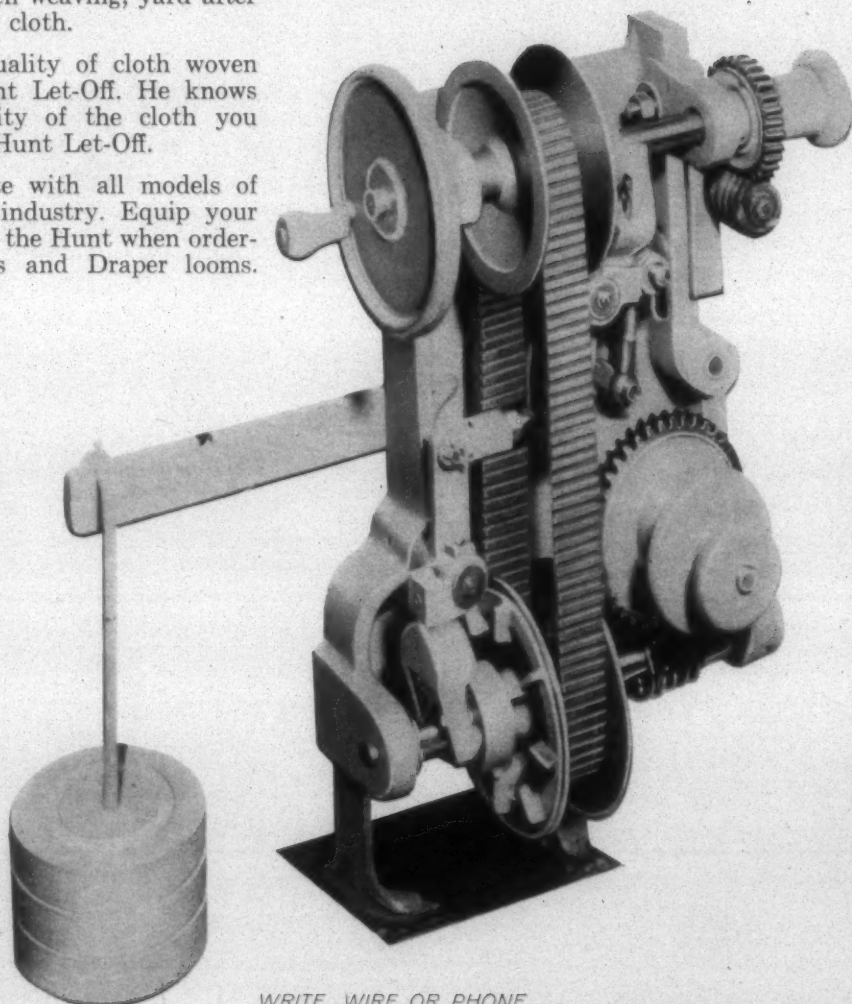
To facilitate maintenance, the contactor

No "Hungry Look" with ... Hunt Let-Off®

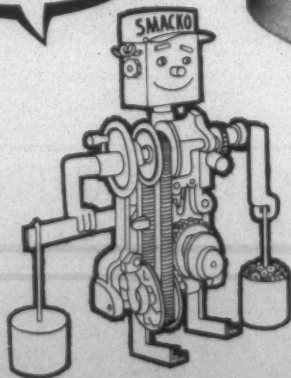
No more "hungry look," no more thick and thin places, wavy lines, set marks—in cloth woven on looms equipped with the Hunt Let-Off. The tension maintained by the Hunt is **CONSTANT!** Result: even weaving, yard after yard after yard of perfect quality cloth.

Ask your customer about the quality of cloth woven on looms equipped with the Hunt Let-Off. He knows and appreciates the better quality of the cloth you weave on looms that feature the Hunt Let-Off.

The Hunt is designed to operate with all models of looms now in use in the textile industry. Equip your looms with the Hunt now! Specify the Hunt when ordering new Crompton and Knowles and Draper looms.



ASK THE MAN
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HE'LL TELL YOU THERE'S
A DIFFERENCE!



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SOUTHERN MACHINERY COMPANY

Box 3217-Station A, 5806 Augusta Road, Greenville, S. C., CRestwood 7-2116

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panel is located in the truck's counterweight and is protected by a steel cover. Easily detachable hood and side plates permit top and side removal of the battery. Drop-down covers expose the carbon pile resistor and hydraulic pump. The floorboard of the truck can be readily removed to expose other internal parts.

Fully loaded the EC-40 can climb a 10% grade, and can travel up to 6.2 m.p.h. forward or reverse. With standard upright, its lift speed loaded is 36 f.p.m. and lowering speed is 70 f.p.m. Outside turning radius is 70".

Standard Clarklift nested roller uprights are used on the new model although a triple stage upright is available as optional equipment.

Dimensions of the EC-40 are: over-all length with 40" forks, 117 $\frac{3}{8}$ "; wheelbase, 47"; width, 38"; aisle for right angle stacking, 82 $\frac{1}{2}$ " plus load length; weight with 36-volt battery, approximately 7,850 lbs.

(Request Item No. E-24)

Aerodynamic Card

Whitin Machine Works has been licensed to sell and produce in the U. S. a new French card system said to have an output of 50 lbs. an hour. Whitin said the unit operates on a new aerodynamic principle. The new system is still under test and details are not yet available. It is sponsored by Societe Alsacienne des Construction Mecaniques. (Request Item No. E-25)

Infra-Red Gas Burner

Red-Ray Mfg. Co., Cliffside Park, N. J., has introduced a new, high-radiation type, H burner designed to provide from 150 to 3,000 b.t.u. per linear inch, depending upon the gas-air mixture supplied. The heat release is the equivalent of from 45 to 900 watts per linear inch. Energy cost with the burner is said to be a fraction of equivalent electrical energy cost. Combustion takes place completely within the fluted refractory, which attains operating temperatures to 2,600° F. when operated in the open, according to Red-Ray.

The burner is said to be particularly suitable for oven, conveyor, rotary drum and roll dryer applications since its design makes combustion chamber unnecessary and the flame is stable under high velocity circulation.

It is available in two types: one, an alloy for the elevated temperatures; the other of cast gray iron for open applications. Burners can be made in any desired lengths from 7" to 100' or more.

(Request Item No. E-26)

New Remazol Dyes

Carbic-Hoechst Corp., New York City, distributors for Farbwerke Hoechst AG., Frankfurt-Hoechst, West Germany, has added the following dyes to its Remazol series of vinyl sulfon reactive dyes: Yellow GGL, Yellow GR, Brilliant Red BB, Brilliant

Blue B, Golden Yellow Y, Brilliant Orange RR and Brilliant Violet 5R.

The new line is now comprised of 15 products, all of which are said to have excellent fastness to washing and to show many exclusive features, due to the Remazol linkage with cellulosic fibers.

(Request Item No. E-27)

Bellows Meter

A bellows meter with a 6" indicating dial has been introduced by Minneapolis-Honeywell's Brown Instruments Division, Philadelphia, Pa., for flow and liquid level meter applications that do not require recording or transmission. Typical of applications for which the mercury-less meter is designed are those for indicating steam, air, gas and water volume of industrial processes and side streams or cuts from fractionating towers.

Fifteen differential ranges from 0-20 to 0-400" of water are available and can be changed in the field by substituting spring assemblies of the desired range.

The meter is equipped with a stainless steel pointer pinion to provide proper meshing and correct indication under all temperature and moisture conditions and a nylon-faced gear sector to assure long life in measuring pulsating flow.

Calibration is made without removing the dial. A micrometer zero adjustment is located on the pointer. Calibrated accuracy is said to be $\pm 1\%$ full scale for ranges of 0-50" of water or above and $\pm 1\frac{1}{4}\%$ full scale for range below 0-50" of water. Standard scale calibrations are 0-100 linear or 0-10 and 0-100 square root with other graduations available upon request.

Other features include: hysteresis $\pm \frac{3}{4}\%$; ambient temperature limits -40° F. to $+175^\circ$ F.; compensations for ambient temperatures; linear damping adjustment, and stainless steel bellows.

(Request Item No. E-28)

Ball-Doffer

A new self-contained automatic ball-doffer unit, designed to wind, doff and resume winding a new ball without operator assistance, has been developed by The Warner & Swasey Co., Cleveland, Ohio, for application to Pin Drafter intersecting draw frames.

Capable of handling 18 x 24" balls weighing up to 50 lbs., the new unit is said to improve operator and machine efficiency and reduce downtime in precombining and top making operations. The doffing cycle, including machine stop, doff, and restart, requires less than 12 seconds.

Functionally styled and of relatively simple design, the new ball-doffer becomes a part of the M-3700 Warner & Swasey Pin Drafter, and can be used with the recently announced Servo-Drafter model. The automatic doffer adds very little to the floor area requirements of the machine.

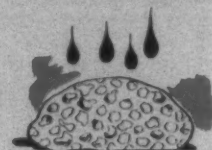
The device not only reduces manual effort and fatigue—particularly with big 50 lb. balls—but speeds production by automatically restarting the machine as soon as mechanical doffing is completed, the company

THE H O U G H T O N LINE

DETERGENTS



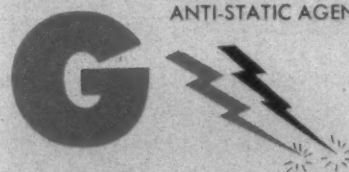
WETTING AGENTS



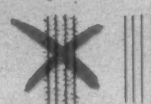
SOFTENERS



ANTI-STATIC AGENTS



BINDERS AND WARP CONDITIONERS



WOOL OILS



SYNTHETIC FINISHES



ON-THE-JOB SERVICE



**WHAT HE SEES
MEANS MONEY
IN YOUR POCKET!**



*results show how new **REZOSOL** binder increases loom production, cuts cost in spun synthetics and blends*

The Houghton technician shown above is checking an abraided yarn previously sized with Houghton's new REZOSOL binder. Subsequent tests on ribbon warps and in full-scale mill production of spun blends proved conclusively that Rezsol:

- ① Improved weaving efficiency
- ② Reduced seconds
- ③ Lowered kettle costs
- ④ Reduced shedding
- ⑤ Provided easier mixing

More and more mills throughout the country are finding Rezsol's superior sizing characteristics the answer to better weaving of spun warps containing the newer synthetic fibers. Rezsol Nos. 1460 and 1438 are the newest members of Houghton's family of textile products to improve production and cut production costs. For details about Rezsol, or other textile processing aids, call your nearby Houghton Man or write: E. F. Houghton & Co., 303 W. Lehigh Ave., Phila. 33, Pa.



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Booth MICR-O-GRIND* the proven flexible card clothing

Overseer of Carding in a S. C. Weaving Mill reports fewer neps and extended stripping cycles:

"We had to run some poor cotton. We tried 8 cards on the Micr-O-Grind needlepoint and immediately noticed a definite improvement in nep count. Cards ran twice as long between grindings. We have now converted all our cards to Micr-O-Grind."

A Superintendent of a Non-Woven Synthetic Mill reports:

"We're carding up to 22 lbs. per hour and our web looks better than ever. We've been able to take off the fancies on most of these cards."

Quality Control Engineer reports:

"Ends down per thousand spindle hours reduced 10%-15%."

Mill Owner reports:

"Four-way savings from Micr-O-Grind system. We grind the cards only four times a year, and then only for an hour. That adds up to about 2,000 lbs. increased production per card per year with a substantial labor saving to boot. We pay no more for Booth Micr-O-Grind than for conventional clothing."

A Booth representative can help you achieve the best in carding performance.

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SINCE 1892

BENJAMIN BOOTH COMPANY
ALLEGHENY & JANNEY STS., PHILA. 34, PA.



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reports. Formerly with standard balling heads, the machine would stop to await doffing and starting of the new ball by the operator. Where one operator handled several machines, delays were quite frequent.

Quality also is improved, according to Warner & Swasey, because starting of each new ball is consistent and automatic. All cores are identical, regardless of variations in operator technique. Also, since there is less handling, the possibility of "roughing-up" the outer wind of completed balls is greatly reduced.

The new automatic ball-doffer is powered by its own 1/2-h.p., 3-ph., 60-cy. motor, electrically synchronized with the Pin Drafter main drive motor. Fail-safe stop motions monitor all functions.

During the operation of the unit, special L shaped arms are used in winding the ball. When winding is completed, the arms remove the finished ball from the balling head and deposit it in a special semi-circular bin at the delivery end of the unit. The arms then release and reposition, ready to grasp the sliver in order to start a new ball. Simultaneously, the semi-circular bin rotates, placing the finished ball in a convenient position for transfer to a cart or conveyor.

Warner & Swasey points out that the automatic doffer's semi-circular bin can be set up to deliver finished balls directly to an in-plant automatic transfer system for movement to succeeding operations without any manual handling whatsoever. The unit will be shown at the American Textile Machinery Exhibition in Atlantic City.

(Request Item No. E-29)

Milling Red Dye

Lanasyn Brilliant Red RL p.a.f., a new milling dyestuff, has been developed by Sandoz Inc., New York City. The dye adds an interesting yellowish red shade to the company's Lanasyn Brilliant range. It is suitable for dyeing wool, silk and polyamide fibers from a neutral or weakly acid bath. In combination with Lanasyn dyestuffs, it is best dyed by the Lyogen SMK process. Being highly soluble, it is of special interest for printing, including Vigoureux printing.

Lanasyn Brilliant Red RL p.a.f. is said to be very fast to light and mill processing, particularly milling and carbonizing. It withstands finishing processes very well and is readily dischargeable, Sandoz reports. Its excellent fastness to cross-dyeing offers new opportunities for fancy stock dyed fabrics.

(Request Item No. E-30)

Compressed Picker Stick

A new, compressed hickory picker stick is being marketed by the Southern Shuttle Division of Steel Heddle Mfg. Co., Greenville, S. C. The stick, due to the new compression process, has changed grain structure and an increased specific gravity which is said to result in a tougher, though still resilient stick. It is said to give improved performance and much longer life. The

compressed hickory stick has been developed for any process where conventional hickory sticks are used. It will be on display at the American Textile Machinery Exhibition. (Request Item No. E-31)

Polypropylene Fiber

Development of a polypropylene fiber that resists the effects of sunlight has been announced by U. S. Rubber Co., New York City.

The fiber, developed chiefly for outdoor furniture webbing, has been made part of the company's line of synthetic fibers known as Royalene, produced by the footwear and general products division. It has been designated as Royalene UF.

Tests indicate excellent performance of the fiber for a period of more than four years, twice the sun life of comparable polypropylenes, according to the company. In addition, it is said to have greater initial tensile strength and can be made in brighter colors than other sun-resistant synthetic fibers now available.

The sun-resistant feature is attained by using a highly stabilized polypropylene resin in conjunction with a special process developed by U. S. Rubber's research division. (Request Item No. E-32)

Wash-And-Wear Softener

A new softener primarily designed for wash-and-wear fabrics, but useful wherever a lubricant is needed, has been developed by Dow Corning Corp., Midland, Mich. The new finish is called Syl-soft 14 and is a silicone-based emulsion that is compatible with a wide variety of finishing agents.

Chemically, the new finishing agent is a stable milky white water dilutable emulsion of reactive silicone fluids. Only a small amount is needed to improve hand, tear strength and sewability of most fabrics, the company states. A pick-up of 1/2% as supplied is usually sufficient for most applications.

Syl-soft 14 is recommended for resin finishing of cottons. The emulsion is nonionic and can be used with most resin finishing formulations. Syl-soft requires no additional curing. This silicone will cure at the same temperatures required to cure organic finishing agents and is not removed during after-washing or other treatments normally given resin finished goods, Dow reports.

The finish is added to the resin formulation after the resins are dissolved and the solution cooled to below 120° F. The company recommends that any resin catalyst required should be added last. Syl-soft can also be used on man-made fibers and blends as well as on woolsens and worsteds to add a luxurious hand.

(Request Item No. E-33)

Acrylic Resin

A reduction in price has been announced by Rohm & Haas Co., Philadelphia, Pa., for its acrylic resin emulsion product used in the production of nonwoven fabrics and



Booth METALLIC Super Precision Metallic Wire

Years of investigation, research and mill study have resulted in the selection and development of Booth Metallic.

Booth studied all metallic wire available the world over, including types produced in Russia. In leading foreign mills with outstanding production records—Graf metallic wire was always the first choice.

Modifying this wire to the needs of American mills, Booth now offers a wire that is milled rather than punched, providing absolute uniformity of tooth shape and height with complete freedom from burrs. Even temper of Booth Metallic eliminates broken teeth and the super hard points prevent premature dulling. This superior wire costs no more than other makes.

A Booth representative can help you achieve the best in carding performance.

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in other textile operations. The product, formerly known as Experimental Dispersion HA-922B, has now been given the commercial name Rhoplex HA-8, and the price is reduced 9 cents per lb. in all quantities. The new truckload price is 25 cents per lb.

Rhoplex HA-8 is described by the manufacturer as a self-crosslinking acrylic polymer in nonionic emulsion form. Although developed specifically as a wash-fast binder for nonwoven fabrics, the product is said to exhibit a durability to repeated washing and dry-cleaning that make it of interest in additional applications—such as pigment binding, the backing of automotive and

furniture upholstery, and the production of durable finishes on fabrics composed of natural and synthetic fibers.

According to the manufacturer, crosslinking of the resin is obtained without the addition of nitrogenous or other external crosslinking agents, and the resin will cure at temperatures as low as 250° F. At higher temperatures, the company states, a minimum amount of Rhoplex HA-8 will give durability comparable to that commonly obtained by higher concentrations of many other binders.

It is reported that Rhoplex HA-8 exhibits the stability normally associated with other acrylic emulsions used in textile finishing. It is said to offer durability to laundry and dry-cleaning operations, combined with re-

sistance to discoloration on aging or exposure to ultraviolet light, are desired properties. (Request Item No. E-34)

Cotton Sequestrants

Refined Products Co., Lyndhurst, N. J., has introduced two sequestrants for scouring and bleaching cotton fabrics. The new products are said to form stable chelates with iron, manganese, and copper even in the presence of strong oxidizing agents. Hydrogen peroxide, sodium hypochlorite, sodium chlorite, sodium chromate, or potassium permanganate do not oxidize the organic molecule or destroy the chelating efficiency of these products, the company reports.

Called Perma Kleeer 95 and Perma Kleeer 312, the products and their metal chelates are not affected by solutions of oxidizing chemicals, even concentrated nitric acid, and are able to maintain chelate stability where oxidation is a problem.

Perma Kleeer 95 is recommended for use in alkaline scouring operations to remove calcium, iron, manganese and copper ion from the water as well as the fabric. It is said to be most effective in alkaline baths where its economy and chelate stability may be utilized.

Perma Kleeer 312 is designed for use directly in the bleach solution where it is said to remove metal ions from solution and inactivate any copper, iron or manganese carried over by the cloth. Catalytic degeneration of the peroxide will be eliminated, and the deleterious effects of oxycellulose formation, such as loss in tensile strength and holes, will be prevented, the company reports. (Request Item No. E-35)

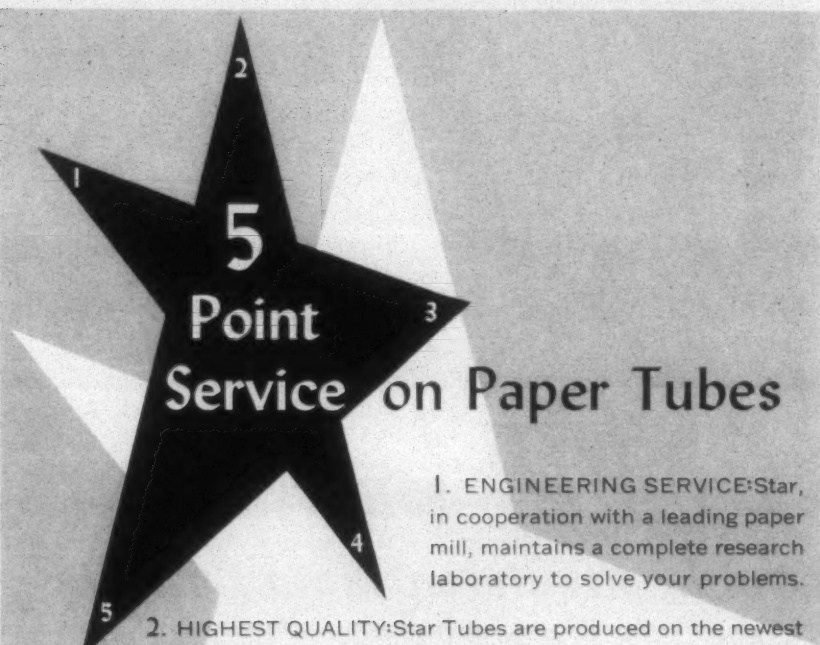
Reactive Bluish-Red

Procion Rubine HBS is a new specialty product recently added to the range of reactive dyes produced by Arnold, Hoffman & Co., Providence, R. I.

Compared with the earlier and widely used Procion Rubine H2BS, which it will largely replace, the new dye has better solubility and superior building-up properties, and in shade it is yellower and somewhat brighter.

A further advantage in printing is the virtually complete absence of staining of whites when washing off prints, while the higher solubility of the new dye will permit it to be printed at much higher concentrations. It fixes more rapidly than Procion Rubine H2BS, five minutes' steaming time being adequate. On all cellulosic materials except melamine/formaldehyde-treated cottons it also shows a slight advantage in light fastness. Its print paste stability is termed excellent.

In textile dyeing Procion Rubine HBS can be applied to cellulosic fibers by all the continuous and semi-continuous methods established for Procion H dyes, giving bluish red shades of high level and washing fastness together with good color value. It can also be applied by hot batchwise processes, giving good build-up and color value. (Request Item No. E-36)




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For the Mill Bookshelf

Processing Compounds

E. F. Houghton & Co., Philadelphia, Pa., has announced the availability of eight folders describing its products of interest to the textile industry.

Anti-static Agent 575 is a water or alcohol soluble substance for the elimination of static electricity in most fibers. It is effective on hydrophobic synthetic fibers and wool.

Cerfax 453 is a liquid preparation which is said to give fast wetting and thorough penetration at concentrations of 0.1% or less. It is said to be a highly efficient re-wetting agent on all types of fabrics.

Cerfax 1400 is a nonionic detergent and wetting agent said to be effective in concentrations as low as .03%. It is also said to satisfactorily withstand the action of chlorine.

Cerfax 1422 is a liquid nonionic detergent designed for use in scouring raw wool in a neutral solution.

Surfax W. O. is a limpid oil said to have unusual wetting out and rewetting properties and good softening quality. It can be used for the wetting out and dyeing of cotton, wool and synthetic yarns and woven piece goods; package dyeing; rewetting and softening Sanforized goods; conditioning yarns; and as a softener in size baths for slashing and finishing.

Warp Conditioner 1429 is a blend based primarily on anionic and nonionic compounds and used for cotton warp sizing. It can be used wherever warp size is prepared by conventional batch cooking.

A final bulletin describes the company's line of stock lubricants for woolens and worsteds. It discusses the factors to consider in choosing a stock lubricant and outlines the features of its lubricants.

(Request Item No. E-37)

Abrasives Chart

A coated abrasives selector chart for textile mills has been prepared by The Carborundum Co., Niagara Falls, N. Y. The large red, white and blue wall chart carries recommendations for coated abrasives to be used in the card room, the weave room, machine shop, the roller shop, etc.

(Request Item No. E-38)

Preparatory Machinery

Proctor & Schwartz Inc., Philadelphia, Pa., has published two bulletins describing its feeding and drying equipment. Bulletin No. 449 describes the company's line of feeds for fiber and leaf. Included in the line are feeds for wet synthetic fibers. The fiber and leaf feeds consist of an electrically inclined apron fitted with blunt spikes spaced on close centers, plus a storage reservoir or hopper, and a pinned leveling roll that rotates against the motion of the upper surface of the inclined apron.

Bulletin No. 448 describes the company's

drying equipment. Included is Proctor's processing equipment for man-made fibers. This line is comprised of preparatory, handling, feeding and blending, carding and finishing equipment.

(Request Item No. E-39)

Adjustable Container

A new folder has been issued by Signode Steel Strapping Co., Chicago, Ill., to describe its adjustable master container called Adjusta-Pak. The folder shows with photographs how the container—adjustable in length, width and height—is put together from eight corner sections.

Listed are the specifications for the three standard sizes of Adjusta-Pak sections—which allow for a minimum size package of 2,268 cubic inches and a maximum of 34,656 cubic inches. The folder points out that the sections may be slotted and scored to any specific requirements.

(Request Item No. E-40)

Psychrometric Chart

J. O. Ross Engineering, division of Midland-Ross Corp., New York City, is making available a new edition of its psychrometric chart. This expanded chart now goes to 350° F. dry bulb temperature.

(Request Item No. E-41)

Silicone Guide

Dow Corning Corp., Midland, Mich., is making available a 16-page summary of the forms, properties and applications of its silicones. Silicone products reviewed range from adhesives to release agents, laminating resins to rubber compounds, and electrical insulation to water repellents. The table of contents is arranged according to applications enabling quick, easy reference to silicone materials. The brochure is extensively illustrated with photographs, tables and graphs.

(Request Item No. E-42)

Warp Sizing Products

Arnold, Hoffman & Co., Providence, R. I., has issued Bulletin 2004 listing and discussing briefly the range of Ahco products for warp sizing. The products briefly described in the bulletin include the Ahcosize liquid emulsions and soft pastes; the Syntharol series of high melting point warp lubricant products recommended for cotton slashing, plus Syntharol ND, an anionic liquid emulsion designed to provide combined lubrication and film continuity in sizing nylon, Dacron and other synthetic filament yarns of moderate and high twist; and Ahcosize P, recommended for sizing Dacron yarns having 12 or more turns of twist per inch.

Also discussed are Ahcobond S, a liquid

water-soluble binder that is said to reduce shedding by imparting flexibility, toughness and hygroscopicity to the sizing film, and Ahcowax, recommended as an adjunct for increased surface lubrication.

Use recommendations based on mill experience are offered for the products. Application of the Ahco product range is discussed with reference to current size preparation methods, including kettle cooking, accelerated kettle cooking with external circulation, kettle heating followed by homogenization, jet cooking and high temperature conversion. (Request Item No. E-43)

Coagulant Aids

Coagulant aids used to speed up and improve coagulation and sedimentation in water clarification systems are the subject of a new 8-page bulletin issued by Hagan Chemicals & Controls Inc., Pittsburgh, Pa.

The illustrated bulletin covers the use of Hagan coagulant aids in waste water systems, cold and hot process softening, color removal, etc. The aids are said to be effective over a wide pH range and can be dry fed or introduced as a slurry solution.

(Request Item No. E-44)

Speed Variator

An 8-page booklet from General Electric, Schenectady, N. Y., describes the new Parmatic speed variator, a compact packaged adjustable speed d.c. motor drive that operates from a.c. power. The new drive, featuring static power conversion, utilizes sealed silicon rectifiers and saturable reactors, is 25% smaller and 50% lighter.

(Request Item No. E-45)

Precision Ground Gears

"An Advanced Concept in Modern Gears" is the title of a new 12-page booklet being offered by the Philadelphia Gear Corp., Philadelphia, Pa., which describes the advantages in using hardened and precision ground gears. New methods, facilities and applications are fully illustrated and described in detail.

Highly accurate gear cutting and grinding facilities with scientific profile and flank control are described with methods of maintaining high standards of quality control throughout production.

(Request Item No. E-46)

Low-Voltage Distribution Equipment

The General Electric Co. has released its 1960 edition of the Buy Log. The 84-page publication covers low-voltage distribution equipment. It is issued jointly by G.E.'s distribution assemblies and circuit protective devices departments, Plainville, Conn.

It is designed to serve as a condensed

FOR THE MILL BOOKSHELF

buying catalog for products of the two departments, including service entrance equipment, light and heavy duty safety switches, tumbler and open-knife switches, hinged wireway, circuit breakers, switchboards, motor control centers, sectional distribution centers, and all types of panelboards and busway.

The book is designed so that application, selection, pricing and ordering information can be found quickly and easily. Among the many features of the publication are: selector charts for each type of product, pictorial descriptions, consolidated pricing tables, and a cross-referenced catalog number index.

Also included are ratings, weights, dimensions, standard package quantities, ordering directions and several pages of general application information.

(Request Item No. E-47)

Dispersing Agents

Jacques Wolf & Co., Passaic, N. J., a subsidiary of Nopco Chemical Co., has announced the availability of a new book describing its Lomar Series of dispersing agents.

(Request Item No. E-48)

Pre-Metallized Dyes

Althouse Chemical Co., Reading, Pa., division of Crompton & Knowles Corp., has made available the list of Lanafast pre-metallized dyestuffs now available. The color group includes: Yellow RFL, Orange RDL, Bordeaux RLL, Rubine BLF, Violet BBL, Navy NLF, and Black NBG.

The new dyestuffs are applicable to wool, nylon, Creslan, Zefran and Acrilan fabrics as well as mixtures and combinations of these fibers.

(Request Item No. E-49)

Solid Lubricant

The Alpha-Molykote Corp., Stamford, Conn., has published a new 4-page, 4-color bulletin describing the wide industrial application of Molykote Type G, a grease consistency lubricant. The bulletin discusses how Molykote G reduces galling, seizing and metal pickup in high pressure and high temperature applications. Typical applications discussed in the bulletin include machine wear-in, fretting, threaded connections and highly loaded gears. Instructions for applying the lubricant are also presented.

(Request Item No. E-50)

Cost Control

A new, 48-page booklet, "How to Build Profits by Controlling costs," has been published by Dun & Bradstreet Inc. It is written from the point-of-view of the small businessman and deals with the difficult problem of cost control.

The first part of the booklet uses the case history approach to common business problems experienced by a typical small business owner. It includes many suggestions for controlling costs. In the second part there is a step-by-step examination of record keeping, analysis of figures, and the use of ratios as a means of comparing performance. This section enables the reader to work out a way to examine and control the costs of his business.

Copies of the booklet are available at \$1.00 each from Dun & Bradstreet Publication Division, P. O. Box 803, Church St. Station, New York 8, N. Y.

Fabric Facts

"Fabric Facts," a compilation of fiber and fabric terms and their definitions, has been published in a new, up-to-date edition by the business book division of Fairchild Publications Inc.

The new pocket-size booklet defines in simple language the fibers, weaves, patterns, colors, finishes, etc., most commonly used in the field of textile-apparel designing, buying, advertising and selling. A special feature is the inclusion of the new generic fiber names added by the U. S. Federal Trade Commission as part of the Textile Fiber Products Identification Act.

The alphabetical listings contain trademark names of the large number of manufactured fibers in use. Fiber trademark names also are grouped in the back of the booklet under the manufactured fibers' generic names assigned by F.T.C. for the purposes of the identification act.

The 80-page booklet is available at \$1.00 a copy from Fairchild Publications Inc., 7 East 12th St., New York 3, N. Y.

Quality Control

A newly enlarged edition of "Quality Control" by Norbert L. Enrick has been published by the Industrial Press, New York City. The purpose of the book is to provide a "simplified presentation from a practical viewpoint of the principles and techniques of quality control in the industrial plant."

The book considers the quality control

problems in piece goods manufacture as well as those in the manufacture of a continuous product. "Quality Control" is available from The Industrial Press, 90 Worth St., New York 13, N. Y., at \$5.50 a copy.

Textile Standards

The American Society for Testing Materials has announced the availability of Part 10 of the 1959 supplements to its book of standards. Part 10 contains 40 standards for textile materials including: fibers; yarns; threads; fabrics; nonwovens; asbestos textiles; and cotton, man-made fiber and wool textiles. The textile standards cover 244 pages of the book. The supplement is available for \$4.00 from the American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa.

Textile Machinery Standards Recommendations

To facilitate the use of textile machinery from different manufacturing nations in a single user country, the Textile Machinery and Accessories Committee of the International Organization for Standardization has for several years been working toward the standardization of certain features and component parts of textile machinery.

As a result, the I.S.O. has now published the following nine standards recommendations:

Recommendation R 92 — Definition of side (left or right) of spinning machinery.
Recommendation R 93 — Cylindrical sliver cans (dimensions).

Recommendation RL 94 — Spindle gauges for ring-spinning and ring-doubling frames.

Recommendation R 95 — Rings for ring-spinning and ring-doubling frame for C travelers (reversible).

Recommendation R 96 — Rings for ring-spinning and ring-doubling frames for C Travelers (non-reversible).

Recommendation R 97 — Rings for ring-spinning and ring-doubling frames for ear-shaped travelers.

Recommendation R 98 — Diameters of drafting rollers for cotton, wool, spun silk and staple fiber.

Recommendation R 108 — Looms — Definition of side (left or right).

Recommendation R 109 — Looms — Working width.

The standardization organization was founded in 1946 to develop common international standards in the fields of technology and engineering. Its recommendations are issued for voluntary acceptance by the member countries. American interests in the I.S.O. are represented through the American Standards Association, one of 44 national standards bodies of as many countries which comprise I.S.O. membership.

The U. S. is not a participating member of the I.S.O. Technical Committee 72 on textile machinery and accessories. As an observer member, the A.S.A. was instructed by American industry to vote "no objection" to the standards. Copies of these recommendations are available at 60 cents each from the American Standards Association, Dept. PR 131, 10 East 40th St., New York 16, N. Y.



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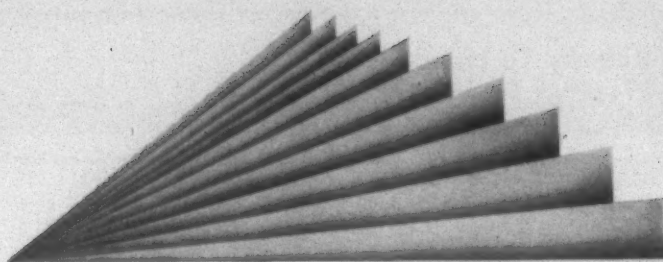
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Roberts To Handle Worsted Equipment

Roberts Co., Sanford, N. C., has entered the field of preparatory worsted system equipment. Three new machines of latest design and technological improvement—ParaDrafters, AutoEveners and ParaBlenders—have been added to the company line under the name Roberts-Tematex.

Roberts-Tematex equipment is manufactured in Italy in a plant affiliated with Roberts through joint licenses and research facilities. They are supplied with electrical motors and accessories made in the U. S., and Roberts is presently gearing to later make certain component parts of the machines in its own plants in Sanford.

These machines have been in production by the Tematex Co. in Milan for more than three years, and over 300 are in operation in plants throughout the world. Those to be sold under the Roberts-Tematex name are the latest models, specifically adapted for American production requirements.

Jacques Wolf & Co. Headquarters With Nopco

Jacques Wolf & Co., a Nopco Chemical Co. subsidiary, has announced the movement of its executive and administrative offices to Nopco's main offices at 60 Park Place, Newark, N. J.

Hecht Stores Salute Dow Chemical Co.

The Hecht Department Stores, Washington, D. C., saluted The Dow Chemical Co., Cleveland, Ohio, with a program of educational exhibits and events April 21-30. Many of Dow's products were displayed during the ten-day event in Hecht's four Washington-area stores. The company's contributions to products for space, leisure, travel and decoration were shown in educational displays throughout the stores.

Major window displays featured Dow products in various industries, including textiles. Each day carried a different theme, including fashion, youth, sports, outdoor living, and homemaking, and were highlighted by appearances of prominent entertainment personalities.

Industrial Rayon Corp. Starts Prolene Production

Industrial Rayon Corp., Cleveland, Ohio, has announced the start of limited commercial production of polypropylene fiber and tow. The polypropylene fibers, which carry the tradename Prolene, are being offered in two, three and six deniers at 90 cents a pound. A wider range will be made available later according to the company. Principal markets for Prolene are in industrial filter cloths and cordage, with some

also going into the manufacture of tarpaulins.

Prolene is lighter in weight than other synthetic fibers and possesses high strength and outstanding resistance to abrasion, the company reports. It also is reported to be unaffected by water and common chemicals. The light weight of Prolene will enable greater coverage, pound for pound, than other synthetic fibers and will allow for more economical manufacture of many products, it was stated.

Industrial Rayon's commercial manufacture of Prolene staple and tow at its Covington, Va., plant follows more than a year of pilot plant operations in Cleveland. Limited quantities of Prolene continuous filament yarns are presently being produced at the pilot plant.

Gossett To Represent Four Additional Firms

Ralph Gossett & Co., manufacturers representatives for textile supplies and machinery, has been named representative for several additional firms. Gossett is now representing Wright Plastics Co. of Atlanta, Ga., manufacturer of polyethylene bags. Gossett territory will include South Carolina, North Carolina and Virginia.

Dee's Latex, Adhesives & Chemicals Co., Lynn, Mass., will be represented by Gossett in South Carolina, North Carolina and Virginia. Dee's produces latex and adhesive compounds for carpet and upholstery fabrics.

Gossett will cover Georgia, Alabama and Tennessee for L. Sonneborn Sons Inc., New York City. The New York firm manufactures oils and chemicals for the processing and finishing of textiles.

Rhodia Inc., New York City, has named Gossett its representative in the entire Southeast for its Rhovyl-T and Rhovyl-55 polyvinyl chloride staple fibers and filament yarns.

Japanese To Produce Shuttleless Loom

The construction of a shuttleless loom in the next three years is planned by the Textile Research Institute of the Japanese Government's Institute of Technological Institute. The loom will be developed apart from foreign technical assistance.

It is expected to be "completely different" from those manufactured in Switzerland and the U. S. with a higher revolving speed and capable of weaving wider fabric than those now produced, according to a spokesman.

Watson-Williams Moves Shuttle Plant South

The Watson & Williams Mfg. Co., Millbury, Mass., plans to move its shuttle manufacturing plant to a site near Pinebluff, N. C. The company has purchased 27 acres

of land and will build a 36,340-square-foot building. It will employ a total of from 40 to 50 persons. Present plans call for the building to be completed and ready for occupancy by August 1.

Chemstrand Inaugurates Creative Research Program

The Chemstrand Corp., Decatur, Ala., has inaugurated a program designed to foster and encourage independent creative research effort by scientists of proven exceptional ability within the company's research center. The new program is designed to provide special incentives and promotions for the scientist who prefers to function largely on his own, free of administrative burdens.

First appointments to the new positions will not be made until later this year. The long-range goal of the program, according to Chemstrand, is to assure that it maintains the best scientific team possible.

American Lava Plans South Carolina Plant

American Lava Corp. of Chattanooga, Tenn., a subsidiary of Minnesota Mining & Mfg. Co. of St. Paul, Minn., has announced plans to build a new technical ceramics plant at Laurens, S. C.

Construction will begin as soon as final arrangements concerning acquisition of the 100-acre plant site are completed with local officials. American Lava manufactures a complete line of wear resistant ceramics for textile production.

It employs some 1,200 persons at its plant in Chattanooga and has outgrown present facilities there.

Frank W. Egan & Co. Plans To Expand

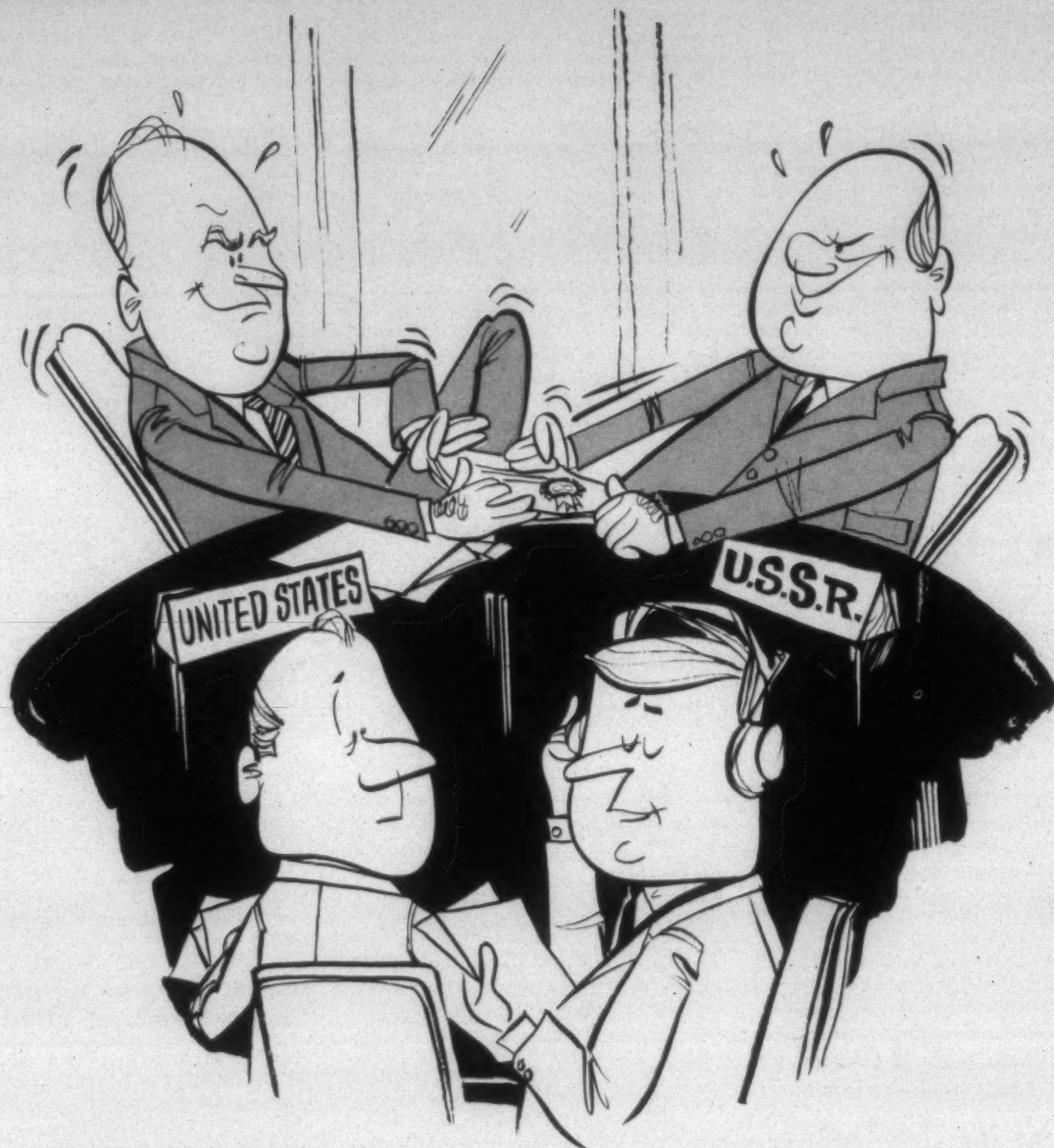
Frank W. Egan Co., Somerville, N. J., manufacturer of machinery and equipment for the textile finishing industry, has announced plans to more than double its principal plant facilities.

An additional 38,000 square feet of working space will be added to the 30,000-square-foot building. Construction is expected to begin this Spring. Completion is scheduled for September.

Industrial Rayon Considers Merger

A proposal for the merger of Industrial Rayon Corp., Cleveland, Ohio, and Texas Butadiene & Chemical Corp. will be voted on by shareholders of both companies.

Sales of the two companies in 1959 were in excess of \$100 million. Industrial Rayon, which will be the surviving corporation, reported 1959 sales of \$62,068,000 and net income of \$839,000. Sales of Texas Buta-



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diene & Chemical last year were \$52,234,000 and net income was \$3,626,000.

Under the terms of the merger, all of the common and preferred stock of Texas Butadiene & Chemical will be converted into 1,687,298 shares of Industrial Rayon, raising the total number of outstanding common shares to 3,538,553.

On approval of the merger proposal, Hayden B. Kline, president of Industrial Rayon, will become chairman of the board of directors and John D. Fennebresque, president of Texas Butadiene & Chemical will become president and chief executive officer of the combined company. Kline has been president of Industrial Rayon since 1949 and has served as an officer of the company since 1929. Fennebresque joined Texas Butadiene & Chemical as president in 1958.

Texas Butadiene & Chemical produces aviation gasoline, butadiene and other petrochemical products at its plant in Channelview, Texas.

Sales Increase At Celanese Corp.

Sales of approximately \$66,700,000 have been reported by the Celanese Corp. of America for the first quarter of the current fiscal year. This compared with \$58,890,000 for the comparable period in 1959. Earnings are expected to be down slightly because of the many activities that are in the development stage and not yet producing a profit, the company reported. Company expenditures for 1960 are expected to approximate \$25 million. The company's stockholders have voted in favor of increasing the number of authorized shares from 10 million to 15 million.

Food Machinery & Chemical Leases Alabama Property

Food Machinery & Chemical Corp., New York City, has signed an option agreement with the State of Alabama for the purchase and lease of substantial acreage of state land at Mount Vernon, in the northeastern section of Mobile County. The company said the option was executed to permit further exploration and development in the area for prospective future use as a major plant site for F.M.C.'s chemical operations.

Commercial Discount Corp. To Lease Capital

Commercial Discount Corp., Chicago, Ill., is now offering long-term (five-year) capital for lease—which may be used for acquisition of equipment or for any other company purpose. This capital will be available to growth companies in the textile industry. A minimum of \$100,000 and a maximum of \$1,000,000 will be set for any one company.

The normal equipment lease for three or five years makes the lessee pay the full purchase price plus a leasing charge. At the end of the lease term, the equipment still doesn't belong to the lessee. It belongs to the leasing company, Commercial points out.

Under the capital leasing program, a company leases the funds it needs from Commercial Discount for three to five years, and buys whatever equipment is desired. At the end of the period, the equipment belongs to the lessee.

The program is not limited to companies wishing to purchase equipment. The capital may be used for any purpose of expanding. It may be used to add to liquid working capital, or for expansion of plant and equipment, or to develop new products, or increase the labor force, etc.

The new program will differ from bank loans in that the five-year term is longer than any short-term bank commitment would allow. The new program will differ from underwriters' public stock issues by involving no share of ownership, or voice in management.

Alliance Textile Machinery Formed In Allentown, Pa.

Alliance Textile Machinery Corp. has been formed in Allentown, Pa., for the purchase and resale of all types of textile machinery, parts and supplies. The firm will also specialize in the buying and liquidation of complete plants.

Morton Zelickson, formerly vice-president with Republic Textile Equipment Co., New York City, is president of the new firm. Ben Shaffer, president of Shaffer & Max Inc., is vice-president. Alliance has storage facilities consisting of 12 warehouses in the Allentown area.

Saco-Lowell Reports Improved Profit Picture

Saco-Lowell Shops reports first quarter earnings of \$226,568, contrasted with a loss of \$1,147,774 for the same period a year ago. These earnings were made on shipments double those of a year ago. Operating income in the period was \$645,110 as compared with a loss of \$785,376 in the comparable period of the previous fiscal year.

American Cyanamid Plans Service, Research Center

American Cyanamid Co.'s fibers division announced plans for opening an applications research and technical service center at the company's Bound Brook, N. J. plant. The center will play an important role in Cyanamid's long-range marketing program for its Creslan acrylic fiber.

The new center will provide processing equipment for dyeing and finishing, and for yarn and fabric applications programs. It also includes laboratories for dyeing, shade matching, fastness testing and physical testing, as well as offices and other facilities for dyeing and finishing field technical service personnel.

American Enka Corp. Expands Nylon Capacity

American Enka Corp., Enka, N. C., plans to expand its annual capacity for producing nylon 6 heavy denier yarns by an additional three million pounds.

The increased output is expected to be available in 1961. This, together with 3½ million pounds scheduled for production in the Fall of this year, will give Enka an annual production capacity of 6½ million pounds of heavy denier yarns.

The new capacity will be utilized for the production of nylon yarns for tires, home furnishings, cordage, carpeting and auto upholstery.

Enka entered the nylon field in 1954 and its operations in that area have been undergoing continuous expansion. Nylon production up to this time, however, has been limited to fine denier yarns. The new expansion program comes on the heels of another which is now nearing completion at the company's Enka, N. C., plant. Together they will provide the company with increased capacity for both fine and heavy denier filament yarns.

Dayton To Produce Rollers At N. C. Plant

Production of rubber and synthetic-covered rollers used in the textile industry will be established by Dayton Industrial Products Co., division of The Dayton Rubber Co., at its Waynesville, N. C., plant.

Designed to meet the expanding roller market of the Southeastern part of the country, roller manufacture at Waynesville will augment production at Dayton facilities in Three Rivers, Mich., and Dayton, Ohio.

Other products produced at the North Carolina plant include specialized rollers used in textile dyeing and finishing. The Dayco department of Dayton Industrial Products Co. will handle all roller sales of this new production facility.

Texize Chemicals Forms Textile Finishing Division

Texize Chemicals Inc., Greenville, S. C., has announced the formation of a new textile finishing division.

J. H. Cochran has been named supervisor of the division. He was formerly with Industrial Products Inc., which was purchased by Texize in December 1959. Prior to that he was associated with Cluett, Peabody Inc.

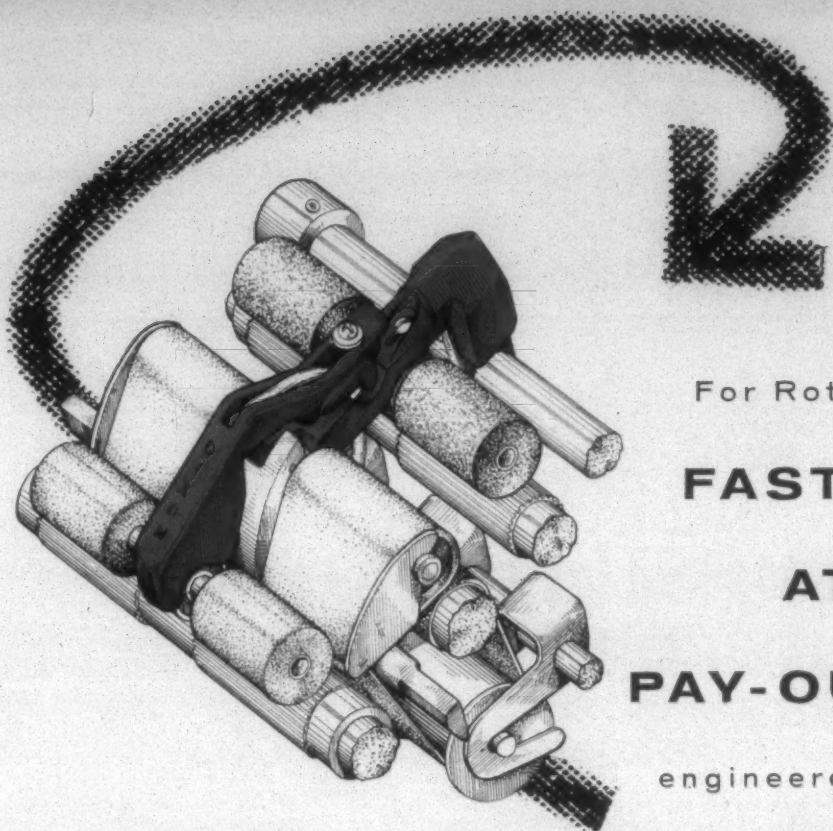
Cochran will be assisted by W. J. Patterson, also formerly with Industrial Products, and Guy Townsend of the Texize staff.

The new division will enlarge the company's services to finishing plants and will supplement the activities of the firm's textile sizing division.

Sales Double At Roberts Co.

Sales of the Roberts Co., Sanford, N. C., for the first quarter of fiscal 1960 ended February 27, were at an all-time company high for any three-month period. Sales of \$1,827,695 for the period were more than double sales of \$913,732 for the like three months a year ago.

A satisfactory profit for the period is indicated with the order backlog continuing strong, sparked by an accelerating modernization trend within the textile industry, the sales and earnings outlook for the full year is promising, according to Roberts.



For Roth System Spinning...

FAST PAY-BACK AT MINIMUM

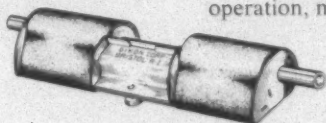
PAY-OUT ... with a Dixon
engineered changeover plan

At Atlantic City

Booths 76, 77, 78

Dixon offers the perfect balance of a proven product plus engineering know-how ... a combination which has produced many fast pay-back changeover plans for spinning mills*. Each Dixon plan is more than just equipment. Our engineers will gear the program to the mill's cash flow, helping to provide major economies on a systematic schedule.

While Dixon Spinning Changeovers are often installed complete in one operation, many mills take advantage of our multi-step changeover program.



On Roth System Frames, the usual plan calls for first adding new middle top rolls, aprons, and cages. Immediate cost-savings result through less lubrication, fewer laps and ends down, reduced cleaning ... **AND LONGER DRAFTS!**

Systematic completion of the Double Apron Roth changeover can be made to suit the individual mill. The final Double Apron Roth changeover eliminates all oiling and cap bars, increases drafts, and gives our customers the most competitive spinning efficiency:

- Middle and back rolls run on RULON ... the oil-free bearing that never is lubricated ... outwears nylon 12 times.
- The Dixon patented self-aligning front roll rides on a hardened and ground, pre-lubed, sealed, precision ball bearing which is guaranteed for years and years and never requires lubrication.
- All parts are maintenance free. Pay-back on your investment is a matter of months.
- Productivity and quality improve. Yarn is cleaner ... seconds decrease.

Compare "Pay-Out versus Pay-Back" on *both* Roth System changeovers being offered to the trade and you'll buy Dixon. Ask for our detailed report showing how an actual installation was completely paid for in 25 months and is now saving \$1.50 per spindle per year by using Dixon Changeovers.

Dixon Corp., Bristol, R. I.—Charlotte, N. C. Southern Sales: Dunson & New, Inc., Box 9202, Greensboro, N. C.; Box 321, Greenville, S. C.; Box 445, West Point, Ga.

*Here are a few of the more than 2,000,000 spindles installed:

Mill	Spindles	System
J. P. Stevens	72,800	Double Apron Casablanca
American & Efird Mills, Inc.	40,678	Double Apron Casablanca
Chicopee Mfg. Corp.	272,032	Double Apron Roth and Casablanca
Pacolet Mfg. Co.	50,656	Double Apron Roth
Hartsville Manufacturing	23,520	Double Apron Roth



ENGINEERING SPINNING CHANGEOVERS SINCE 1876



Parade of Progress

SEE
WORLD'S MOST ECONOMICAL
METHODS OF FILLING
PREPARATION
AND FINEST
BOBBIN CLEANING
AND HANDLING EQUIPMENT
IN OPERATION

BOOTHS 311-320

THE TERRELL MACHINE CO., INC.

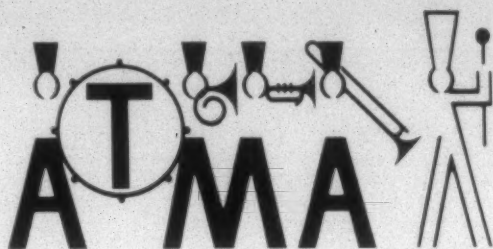
CHARLOTTE, N. C.

textile bulletin

VOL. 86

MAY 1960

NO. 5



American Textile Machinery Exhibition - International

Parade of Progress

ATLANTIC CITY, U. S. A.
MAY 23-27, 1960

THE American Textile Machinery Exhibition—International, the largest textile machinery show ever to be presented in the U. S., will open at 10 a.m. Monday, May 23 at Convention Hall, Atlantic City, N. J. More than 300 exhibitors will be on hand, representing virtually every major manufacturer of textile machinery, equipment and supplies in this country, as well as many foreign manufacturers.

As an aid to those visiting the show, THE BULLETIN offers the following list of exhibitors with a brief description of what they plan to display. A reproduction of the Convention Hall floor plan is also included showing the location of each exhibitor. The information given has been compiled from data supplied by exhibitors. All listings are not complete; and in some instances no data was available from particular exhibitors at press time (booths marked D.N.A.). In displays where some exhibitors are occupying more than one booth, only the lowest

booth number is shown. Convention Hall will be open from 10 a.m. to 6 p.m. throughout the week.

Abbott Machine Co. 84
Wilton, N. H.
Bobbins and spools, accessory equipment for preparatory machines.

Abington Textile Machinery Works 240
North Abington, Mass.
(Representing Societe Francaise Cardpen)

(1) Abington vacuum stripping system for revolving flat top cards. (2) Abington hand knotters. (3) Automatic remote controlled bottom discharge receivers. (4) Cardpen.

The Cardpen, a drafting attachment to replace calender rolls on a cotton card, is said to provide a 20% increase in production rate without a loss of quality. In the unit the web from the doffer is condensed into sliver which passes through a set of rolls and a rotary comb.

John W. Burbine, W. W. Brame, M.

R. Bradley, Sumner Smith Jr., Francis J. Richardson, Oliver H. Ramo.

Abney Mills 1229
Greenwood, S. C.
(See Edda International Corp.)

Aerosol-Compagnie 1538
West Germany
Accessory equipment. (D.N.A.)*

Agricultural Research Service 755
Southern Regional Research Laboratory
U.S.D.A.
New Orleans, La.
Preparatory machine for cotton. (D.N.A.)*

Allen-Bradley Co. 404
Milwaukee, Wisc.
Accessory equipment. (D.N.A.)*

Allen-Warper Co. 274
Lowell, Mass.
Preparatory equipment. (D.N.A.)*

Allentown Bobbin Works Inc. 654
Allentown, Pa.
Bobbins and spools for the throwing of fine denier yarns.
Henry W. Mack, Harold S. Barnes.

Allied Chemical Corp. 36
New York, N. Y.
(D.N.A.)*

Allis-Chalmers Mfg. Co. 66
Milwaukee, Wisc.
(1) Ultra-speed package drive unit—available in 5 to 200 h.p. (2) Lint-tight manual motor control. (3) Super-Seal open-type motor. (4) Totally

**Here's A Preview
Of The Biggest
Textile Exposition
Ever Held
In The U. S.**

A.T.M.E. —

enclosed fan-cooled motors (Type G). (5) Close-coupled pump (Type C-2) for conditioned air.

E. T. Cuddleback, A. W. Robinson, C. B. Rumble Jr., L. P. Gregory.

Societe Alsacienne de Constructions Mecaniques 940
France

(Represented by Atkinson, Haserick & Co.)

(1) High-speed comber for worsteds and synthetics, Model PERL. (2) Two-head high-speed drawing frame, for cotton and synthetics, Model ER. (3) Automatic carriage for screen printing on tables.

J. Nifenecker, G. Weinberger, J. F. Berry, Robert Leslie Jr.

American Dyestuff Reporter 758
New York City
A textile publication.

American Lava Corp. 418
Chattanooga, Tenn.
AlSiMag thread guides for the entire textile industry.

J. B. Shacklett, Jay S. Gosnell, W. J. Geary, J. W. Crisp, W. H. Cooper.

American Moistening Co. 51
Providence, R. I.

(1) Ceiling cleaner—twin propeller fans oscillate throughout a full 180° traverse cleaning entire room above the eight-foot level. (2) Roving frame cleaner—low voltage track, said to clean all portions of the frame. (3) Modulating interrupter — multiple complete cycles per minute of humid-

ity control operation. These short interrupted cycles are proportioned to the demand to completely eliminate fog and improve over-all quality of the spray. (4) Floor mounted room cleaner — standard Amco Heliclone loom cleaner supported from the floor. (5) Aero-Miser — air pressure-water pressure type atomizer, said to be exceptionally economical as to compressed air consumption.

American MonoRail Co. 1437
Cleveland, Ohio

American MonoRail will introduce its new loom cleaner. The cleaner is mounted so that the cleaner heads travel closely over the front and back of the loom. The heads send out intermittent currents of air directed at opposite angles to set up a fluttering action in the warp yarn and thereby prevent lint accumulation. Direction, speed and velocity of this sweeping action are all easily adjustable.

Chief advantage cited for the roving frame cleaner to be displayed is that when the frame stops, the air toward the roving stops regardless of the position of the cleaner. This is designed to prevent breaks, doubling and stretch while the cleaner travels on to resume action over the next operating frame.

MonoRail's vacuum type spinning frame cleaner to be shown at the exhibition can travel over as many as 30 frames eliminating floor lint, improving yarn quality, reducing contamination, and preventing accumulation on all ceiling equipment. Using the collection technique found on earlier models, the cleaner automatically travels to the stationary vacuum cleanout box which strips the exposed lint on the screen of the traveling unit. The door closes as it passes the stationary cleanout box nozzle

and it continues on its round of floor cleaning.

American Rieter Co. 5
West Caldwell, N. J.

The new Model DO draw frame is equipped with: Positively driven top and bottom lifter rolls over each can; patented polar drafting arrangement; Central roll adjustment with scale to show settings; Pneumatic weighting of top rolls; cans up to 18x42"; speeds up to and over 600 ft./min. (speed is not limited by mechanical machine limitation).

The rebuilt E 7 combing machine claims advantages such as: Speeds up to 180 n.p.m.; feed lap of 12" width and 20" diameter, weighing up to 1,050 grains/yard. Noil percentage from 5 to 25%; Production from 16 to 60 lbs./hr. at 90% efficiency; Draw box draft from 3.7 to 9.6; Adjustable backward or forward feed.

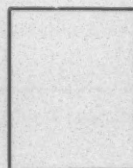
The Pattern GS slubbing frame is designed to offer higher speeds and a more even product. In making improvements the company says it has been concerned with the elimination of count variation in two places: between the front and back line of spindles; and between empty and full bobbins. The slubber contains such features as: Straight sided (not convex or concave) cones; Special cam control builder motion; A new device to afford fractional tooth tension adjustment between front roll and flyer; Guide saddle top roll suspension; Package sizes up to 14x7"; New design of off-set drop presser in order to pull roving straight through the hollow leg.

The Pattern G-4 ring spinning frame features: Movable base rails which descend slowly during the building of the bobbin and thereby maintain a constant balloon size and ten-

REGISTRATION CARD

Please TYPE or PRINT in filling in this card. The Identification stub attached is to be filled in at Registration Desk. Handwritten card not accepted. Cards that are not complete will delay your entrance into the Exhibition. DO NOT MAIL CARD. Bring it to the Registration Desk to the left of the lobby of Convention Hall.

YOUR NAME _____
TITLE _____
COMPANY'S BUSINESS OR PRODUCT _____
CO. ADDRESS (STREET) _____
CITY _____ ZONE _____ STATE _____
YOUR HOTEL _____



DO NOT DETACH

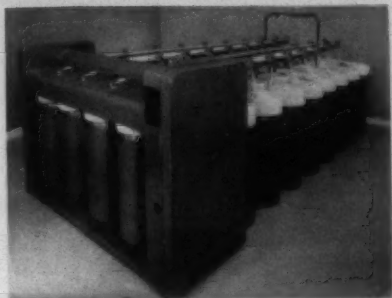
CITY, STATE OR COUNTRY

COMPANY

NAME

ATMA
of
Parade
Progress

A REAL TIME SAVER—A sure way to speed your entry into Atlantic City's Convention Hall will be to fill out your Registration Card before you get there. Admittance to the show, of course, will be by badge only. Most visitors will arrive at the hall with a blank Registration Card. You can sail ahead of them by having your card TYPED or PRINTED in full when you get there.



MODEL DO DRAW FRAME—One of a number of new draw frames to be shown at Atlantic City will be this new Model DO unit being introduced by American Rieter Co. in Booth 5. The new frame offers such features as positively driven top and bottom lifter rolls over each can; a patented polar drafting arrangement; central roll adjustment with a scale to show settings; and speeds up to 600 f.p.m.

sion; Automatic underwinding and stopping mechanism to return base rails to doffing and starting position when bobbins are full; Double apron drafting arrangement inclined at 45° with short top and long bottom aprons; Anti-friction bearings in all three lines of top and bottom rolls; Guide saddle top roll suspension; The Hebucofil suction cleaning system which operates on the principle of continuous cleaning of the entire drafting area and is connected with a thread aspirator.

America's Textile Reporter 302
Boston, Mass.
A textile publication.

Anderson Machine Shop 551
Needham Heights, Mass.
Pacific evenness tester.

Maschinenfabrik Arbach 823
West Germany
(See Cosa Corp.)

Armstrong Machine Works 394
Three Rivers, Mich.
Steam traps, humidifiers and strain-
ers.

Ashworth Bros. Inc. 669
Fall River, Mass.
(1) Card clothing for cotton, wool
worsted, synthetic, rayon and asbestos
cards. Brush clothing and card cloth-
ing for special purposes, including
hardened point, plough ground and
and side ground card clothing. (2)
Flat clothing—both regular and hard-
ened point for solid, split or flexible
metallic flats. (3) Metallic wire for
cotton, woolen, worsted and synthetic
cards; also lickerin wire and garnet
wire. (4) Flexible bend grinding. (5)
Remilling of flats. (6) Conveyor belts
(woven wire) for use in nonwoven
textiles and other applications.

R. C. Ashworth Jr., W. J. Flynn
Jr., H. Ashworth, F. L. Armitage, R.

C. Ashworth III, G. A. Davis, C. E.
Lalime, Phillip Brann, J. E. Seacord
Jr., Thurman Hart, Michael Groce, A.
E. Johnston Jr., C. C. Witherington
Jr., W. G. Halstead, Ray Clary, F. W.
Hale, D. J. Taylor.

Atkinson, Haserick & Co. 818
Framingham, Mass.
(Representing Platt Bros. Sales Ltd.,
Carding Specialists Ltd., Societe
Alasacienne de Constructions Meca-
niques, Tomlinsons (Rochdale) Ltd.,
Spencer & Halstead Ltd., Plutte,
Koecke & Co., Standfast Dyers and
Printers Ltd., Office Meccaniche Men-
negatto. See individual listings.)

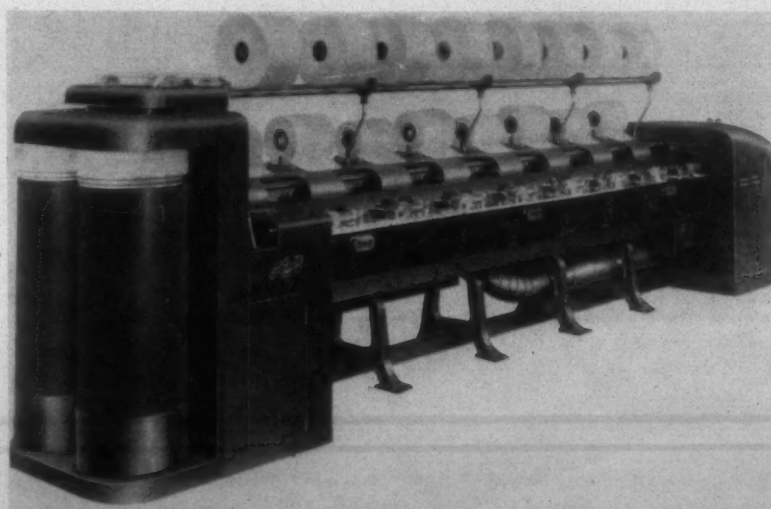
John L. Coon, Walter P. Rutley,
Elmer J. McVey, Harvey H. Clinch,
C. Perry Clanton, F. Eugene Boze-
man.

W. H. Bagshaw Co. Inc. 63
Nashua, N. H.
Accessory equipment for preparatory
and drying machinery. (D.N.A.)*

The Bahnson Co. 11
Winston-Salem, N. C.
Automatic cleaning and vacuum col-
lecting systems for preparatory, spin-
ning and weaving machinery.
(D.N.A.)*

Barber-Colman Co. 434
Rockford, Ill.
(1) The 60-spindle Type FF automatic
spooler. (2) The 54½" DW super-
speed warper with DC creel. (3) The
66" gSH warp drawing machine.
R. G. Ross, W. P. Turner, F. D.
Taylor, H. C. Schleicher.

Barco Mfg. Co. 382
Barrington, Ill.
Rotary joints for steam fitting, flexi-
ble ball and swivel joints.



HARTFORD 8 COMBER—Platt Bros. Ltd., represented in the U. S. by Atkinson, Haserick, will display its Hartford 8 comber, an eight-head unit designed to quality comb at up to 60 pounds an hour.

A.T.M.E.

The Baxter Corp. 1
Paterson, N. J.

(Representing Societe des Mecanique)
(1) Verdol Antares 250 endless paper
tape system double lift jacquard head
over Swiss Saurer loom. (2) Verdol
Sunchroe 190 endless paper tape sys-
tem single-lift jacquard head on test
stand. (3) Verdol Jacatron automatic
card puncher for endless paper tape.
(4) Cloth winding boards and textile
wrapping papers.

Irving S. Baxter, J. C. Bowen, G.
Servillat, P. A. Cassidy, Roy Thomp-
son, W. Luther, W. Riley.

Edward S. Beard 702
Spring City, Pa.
Steel spreaders. (D.N.A.)*

Bentley Knitting 39
Machinery Organization
Providence, R. I.
(Represented by A. B. Carter Inc.)

Birch Bros. Inc. 466
Somerville, Mass.

Model 7 three-roll automatic pneu-
matic cut-off winder will be displayed.
It features first and second position
air hold down, automatic pneumatic
transfer from first to second position,
automatic hydraulically actuated snub-
bers to gently lower the cloth roll into
the second winding position, pneu-
matic doff, electro-pneumatically oper-
ated with automatic roller lapping of
cut end, and Veeder-Root electronic
predetermining counter for automatic
cut and pre-set yardage.

The new two-roll laboratory Mini-
calender is designed for quick roll
changes so that one machine in the
laboratory can perform all of the

A.T.M.E.—

common calendering operations with only a simple quick roll change.

A new Flexlife ball bearing expander roll and a complete selection of new Flightweight sewing machines will also be exhibited.

Clifford W. Birch Jr., Harold W. Birch, Richard Briggs, John C. Crosby, Herbert J. Anderson.

J. Bishop & Co. Platinum Works 709 Malvern, Pa.

A variety of spinnerettes for the synthetic fiber industry and a variety of samples of small diameter (.008 to 1" o.d.) tubing of stainless steel, nickel, nickel alloys, super and exotic tubing used in various textile machinery.

J. J. Buckley, Howard S. Roberts, M. Burkus, D. G. Wise, J. H. Porey, C. McDonald, M. A. Hatch.

Bonas Bros. Looms Inc. 800 England

Preparatory machinery and narrow fabric looms. (D.N.A.)*

Benjamin Booth Co. 390 Philadelphia, Pa.

(1) Metallic wire produced by Graf & Co., Switzerland. (2) Super-O-Tape condenser tape for woolen cards. (3) Mic-O-Grind card clothing, and the Mic-O-Grind grinding head for grinding card clothing in the mill. (4) Gran-O-Top the S.R.R.L. granular card conversion.

E. A. Sharpe Jr., Norman Bush, Ed Snape, Charles Stover, William Gill, Richard Hurley, Wilson Hurley and Henry Harrison.

Briggs-Shaffner Co. 644 Winston-Salem, N. C.

Various aluminum beams will be shown including: A 38" section beam for cotton warp; A 36" section beam for acetate and rayon warps; A 32" section beam for nylon warps; A 32x42" tricot beam for acetate, rayon and cotton warps; A 21x42" tricot beam for nylon warps; A 21x42" tricot beam for acetate and rayon warps. Aluminum quill boards, dry rods, castings and miscellaneous anodized parts will also be shown.

The company reports that its new 38" beam with a traverse dimension of 72½" holds the equivalent in yarn of three bales of cotton.

Paul H. Johnson, E. N. Shaffner, C. A. Sinquefield, S. A. Harris.

British Northrup Ltd. 842 Great Britain

Weaving machinery. (D.N.A.)*

Trockentechnik K. Bruckner 1529 New York, N. Y.

Finishing equipment (D.N.A.)*.

The Bunting Brass & Bronze Co. 81 Toledo, Ohio

Aluminum bearings, bronze sleeve bearings, sintered sleeve bearings, cast bronze, sintered and aluminum bearing bars.

W. J. McTighe, P. E. Holt, W. C. Bracken.

Burlap Tubing Mfgs. Inc. 281 Philadelphia, Pa.

Supplies for packaging (D.N.A.)*

Fritz Buser Engineering Works 1208 Switzerland

Screen printing machines. (D.N.A.)* (Represented by Jungfrau Inc.)

H. W. Butterworth & Sons Co. 621 Philadelphia, Pa.

(1) A patented winder, said to be built around a new concept of automatic cutting and doffing. (2) A six-needle sewing machine. (3) A new method of applying pneumatic pressure to printing machine mandrels. (4) A compartment washer. (5) Six-cylinder dryer. (6) Laboratory padding machines.

J. W. Butterworth, De Haven Butterworth, Stanly Brooks, Thomas M. Davis Jr., T. W. Kitchen, George M. Marks, Victor A. Jones, Harold E. Whitaker.

C. I. T. Corp. 1218 New York, N. Y.

Financing services.

Callebaut-De Blicquy S. A., Ets. 853 Belgium

Dyeing machinery and laboratory equipment. (D.N.A.)*

Canadian Textile 752 Journal Publishing Co. Montreal, Quebec

Carding Specialists Ltd. 818 Great Britain

(Represented by Atkinson, Haserick & Co.)

(1) The Crosrol cotton web purifier. (2) Eureka card tops.

Andre Varga, Andre Jamar.

Societe Francaise Cardpen 240 France

(See Abington Textile Machinery Works)

A. Carniti & Co. 1336 Italy

(Represented by Stellamcor Inc.)

One-sided direct spinning frame for worsted and man-made fibers, 4½" gauge, 3¼" ring, 12" bobbin, 6-roll double apron high draft system C.25 Type. Draft range from 50 to 200. Two drafting zones.

Carolina Fiberglass 1205 Products Co.

Wilson, N. C. Accessory equipment for dyeing processes. (D.N.A.)*

A. B. Carter Inc. 39 Gastonia, N. C.

(1) Boyce weavers' knotter. (2) Boyce fishermen's knotter. (3) Spinning and twister travelers. (4) Phantom drafting system.

J. K. Davis, D. E. Phillips, P. L. Piercy, W. T. Horton, J. R. Richie, B. R. Link, J. B. Carter, E. Haines Gregg.

Chandler Machine Co. 326 Ayer, Mass.

(1) Power and hand swatch cutting

Opening Day Ceremonies

THE American Textile Machinery Exhibition—International will open officially on Sunday, May 22 at 3 p.m. at which time North Carolina's Governor Luther H. Hodges will cut through an invisible electronic ray that will put into operation the machinery assembled in Convention Hall.

Appearing on the Opening Day program with the Governor will be Thomas C. Mann, Assistant Secretary of State for Economic Affairs; Carl F. Oeschle, Assistant Secretary of Commerce for Domestic Affairs; and Clarence L. Miller, Assistant Secretary of Agriculture. Each will speak briefly on behalf of their respective departments. W. K. Child, president of A.T.M.A., will preside; and Governor Robert B. Meyner of New Jersey will welcome the guests.

Following these ceremonies, an hour's preview of the exhibition will be held. A reception and buffet dinner at the Dennis Hotel honoring visiting notables will conclude the official program.

Among invited guests expected to attend are top government officials, ambassadors and embassy representatives from participating countries and others having embassies in Washington; many Congressional leaders; and officers and directors of all associations representing the textile industry.

pinking machines. (2) Permanent pleating machines.

D. C. Maxant, A. A. Maxant.

The Chemstrand Corp. 71
New York, N. Y.

Chemstrand will display products made with its Acrilan acrylic fiber and Chemstrand nylon including: carpets of Cumuloft continuous filament textured nylon yarn; spun dyed Acrilan—where the color becomes an integral part of the fiber's chemical composition; end-products of Acrilan and Acrilan 16—exhibiting the ability of this fiber combination to be cross-dyed in a single bath.

W. G. Luttge, M. R. Dalton, I. Bollinger, H. Cramer, R. H. Hale, C. C. Madeira, W. C. Melton Jr.

Clark, Cutler & McDermott Co. 288
Franklin, Mass.

Air-Loc vibration dampening machine pads and mount including: Air-Loc 4-17-1 Giant Grip loom pad for all textile machines; Air-Loc 4-17-4 & SL for all machine tools other than textile machines; Air-Loc wedge-mounts—adjustable mounts.

Robert H. Schmidt, F. Roland McDermott, Robert A. Geromini, Victor O. Dauray.

Clark Door Co. 58
Newark, N. J.
Automatic doors. (D.N.A.)*

Cleveland Worm & Gear Co. 299
Division of Eaton Mfg. Co.
Cleveland, Ohio

(1) New Cleveland worm gear fan-cooled speed reducers designed to permit higher horsepower and torque ratings. (2) New motorized Cleveland speed variator. (3) Other gear speed reducers, worms and gears for built-in drives and speed variators.

Clinton Corn Processing Co. 62
Clinton, Iowa
Reception booth.

A. C. Junge, R. C. Rau, C. F. Cline Jr., B. L. Estes, Glenn Henderson, Charles W. Hite, E. F. Patterson, Joe Finley, Grady Gilbert.

Coats & Clark Inc. 417
Newark, N. J.
Nylon twister travelers.
R. H. Wilcox, T. B. Farmer, M. H. Cranford, H. A. Carter.

Cocker Machine & Foundry Co. 615
Gastonia, N. C.
(1) Slasher. (2) Section beam warper. (3) Tricot warper. (4) Nemo Jet size cooker. (5) Sample creels.

Collins Bros. Machine Co. 8
Pawtucket, R. I.
Ten-spindle Sav-Yarn twister with

end brake and patented Airestop spindle.

Henry Collins, N. Nelson Collins, Karl H. Inderfurth, Hugh Williams.

Cometsa 808
Spain
(Represented by E. B. Rock)

Cook Machine Co. 270
Lowell, Mass.
(See Riggs & Lombard)

Corn Products Sales Co. 295
New York, N. Y.
Accessory equipment for preparatory processes; sizing materials for preparatory and finishing equipment.

Cosa Corp. 824
New York, N. Y.
(Representing Maschinenfabrik Arbach, Croon & Lucke, Erhardt & Leimer, Kettling & Braun, Mettler's Sons Ltd., Schilde Maschinenbau Ag., A. G. Scholl, Stork & Co., Georg Sahn Maschinenfabrik.)

(1) The Arbach steaming and finishing machine. (2) A Stork model of its Rope-O-Matic washing machine. (3) A Schilde air penetration dryer. (4) Sahn high speed precision winders. (5) A Kettling & Braun napping machine for knitted fabrics. (6) Scholl package extractor and dryer laboratory drying machine. (7) Erhardt & Leimer cloth feeders, selvage guides, iron detector. (8) Mettler skein to can

A.T.M.E.

winder, yarn singeing machine, double winder and Croon & Lucke reeling machines.

W. Swatek, O. J. Guttman, R. H. Meadows, H. J. Korndorfer, F. Saxer, G. Sahn, W. Schmidli, J. Nieding, L. Schmidt, H. Mettler, I. Meyer, S. Eberhard, Vetterlein.

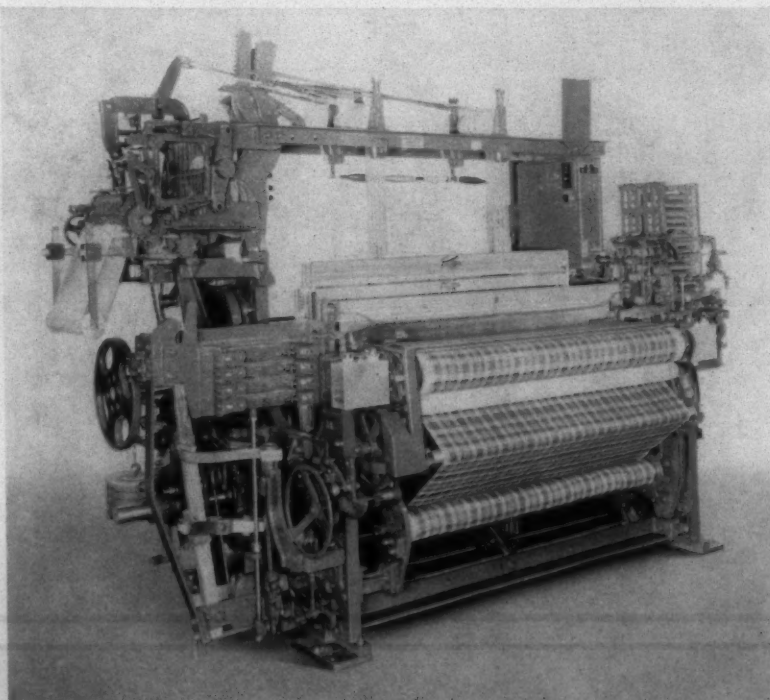
Cotton-McCauley & Co. 118
Pawtucket, R. I.

(1) Cleanguide double apron drafting with fabricated new type roll stand and spring weighting in operation on a Saco-Lowell spinning frame. Also available as a spinning changeover to handle cotton and synthetics. (2) Climax ball bearing top rolls for spinning and roving to handle cotton, synthetics, worsteds and wool. (3) Cleandraft non-lubricating (nylon) top rolls for spinning and roving to handle cotton, synthetics and worsteds.

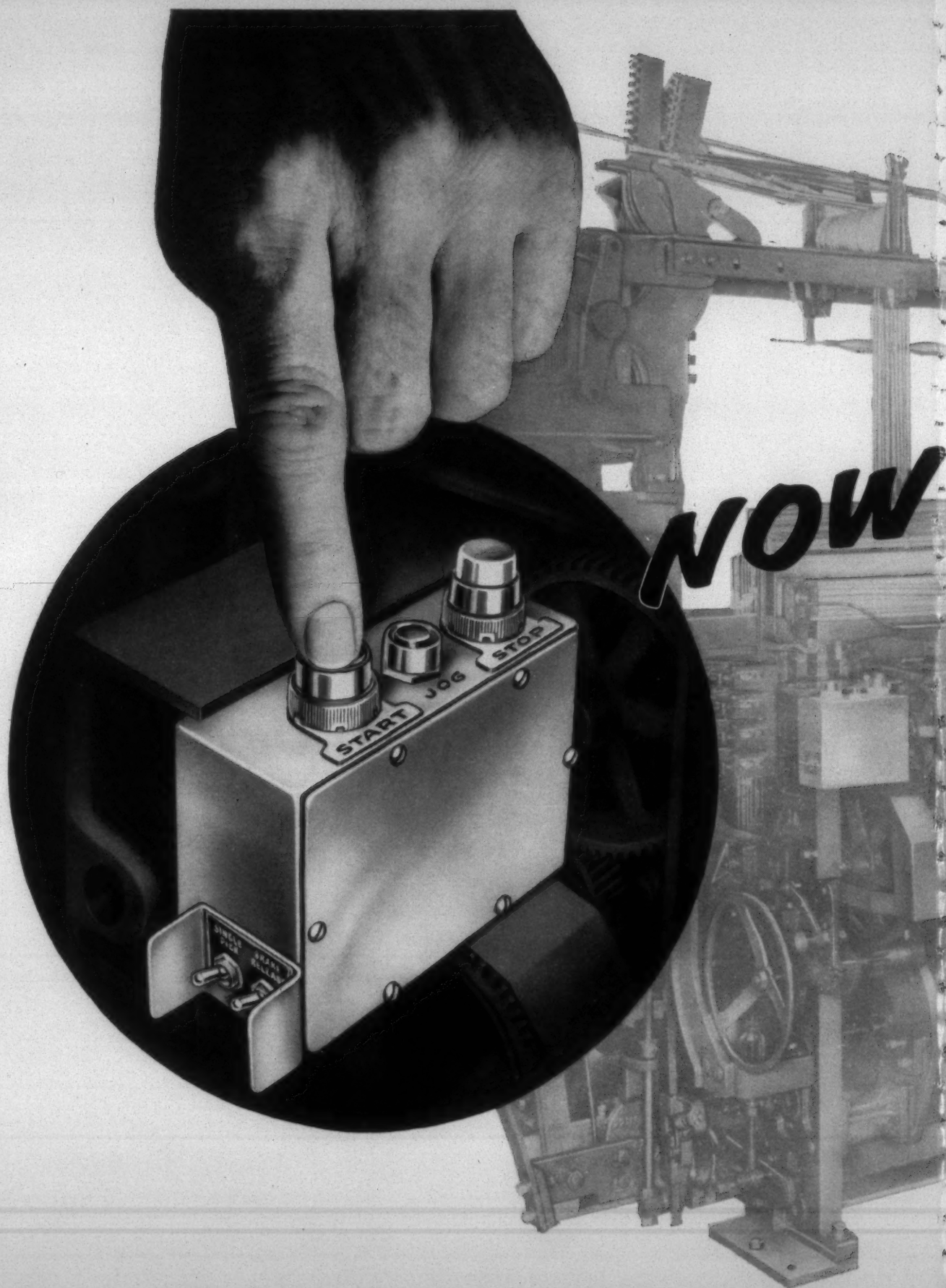
Frank H. Cotton, Raymond L. McCauley, Richard K. Butler, J. Bertram Howarth, Cecil A. McAbee, Hubert H. Robbins, Benjamin F. Deming.

Cotton Trade Journal 755
Memphis, Tenn.
A cotton publication.

Courtaulds (Alabama) Inc. 33
New York, N. Y.
Coloray solution-dyed rayon fiber, Cor-



PUSHBUTTON WEAVING—Crompton & Knowles will have on display in Booth 360 this C-7 automatic bobbin changing dobby terry loom running on a fancy towel with three types of filling yarn.



TRY THE SENSATIONAL NEW ELECTRIC CONTROL



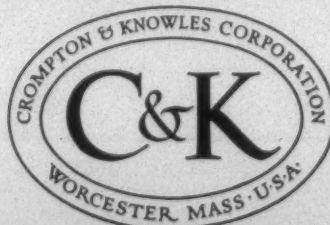
RUN A LOOM YOURSELF

You're invited to operate any of the new C-7 Looms with the all-electric push-button controls at the American Textile Machinery Exhibition. See how easy it is to start, stop, jog reverse, or control a single pick operation. Three of these new looms will be ready for you to run, weaving fancy terry towels, a fine filament fabric, or synthetic dress goods.

Also see in operation the new C & K PAPA Loom (Pick And Pick Automatic) weaving upholstery fabric. Observe the high speed Needle Loom weaving two 1¼" wide elastic webs at the same time. Examine at eye level a 1304-hook double lift double cylinder Jacquard with the latest features in operation.

Let us demonstrate how C & K Looms of tomorrow can help you increase the efficiency of your mill today.

**MANUFACTURERS OF
THE WORLD'S LONGEST LINE
OF AUTOMATIC BOX LOOMS**



Charlotte, N. C. • Allentown, Pa. • Crompton & Knowles
Jacquard Supply Co., Pawtucket, R. I.
Crompton & Knowles of Canada Limited, Montreal, Que.

YOURSELF ON THE C-7 LOOMS AT THE SHOW!

**BOOTH NOS.
360-377**

A.T.M.E.

val cross-linked rayon fiber and Topel cross-linked rayon fiber.

Royston Dunford, Homer M. Carter Jr., George Stanley, Norman Casey.

Crabtree Textile Accessories Ltd. 1200
Lancashire, England

Exhibiting: (1) Sintox—hard sintered aluminum thread guides. (2) Crabtree textile guides in hardened steel, hard chromium plated, in Setasatin—satin chrome finish and Mirrobright—high lustre polished chrome finish. (3) Gate tension units of all designs. (4) Package Holders—holders, swifts and other wire forms for the support or process mounting of cakes, hanks, bobbins, tubes, etc. (5) Card clothing—roll and flat for cotton, man-made fiber, woolen and worsted cards. (6) A full range of paper, wood and plastic tubes, quills, bobbins and other packaging bases.

John Crabtree, Mrs. Jean Crabtree, J. Bryan Ashworth, G. Arnold Winterburn.

Crompton & Knowles Corp. 360
Worcester, Mass.

(1) The C-7 automatic bobbin changing dobby terry towel loom, 38" between swords, 25 (20) harness, $\frac{3}{8}$ " gauge, paper indicated 4x1 box. The loom will be running on a fancy towel with three types of filling yarn. (2) C-7-S automatic bobbin changing dobby loom, 56" between swords, 20 harness, 15/32" gauge, paper indicated 4x1 box. This loom is designed to produce fine filament fabrics and will run on a 4-color filling job utilizing a rotary magazine. (3) PAPA pick-and-pick automatic bobbin changing loom, 72" between swords, 25 harness (Knowles 4/10" space head), 4x3 box built originally to weave automatically fancy pick-and-pick worsted or blended suitings as well as wide swim suit or foundation garment material with alternating picks of covered rubber and nonstretch yarn. It will be running on a pick-and-pick upholstery

fabric. (4) An improved narrow fabric needle loom designed for tapes and elastic will be running elastic web at more than 1,400 sheds per minute on each of the two webs woven simultaneously side by side. It is equipped with a filling stop motion and an electric warp stop motion with signal light. (5) The 1304-hook double-shift, double-cylinder jacquard.

Croon & Lucke 924
West Germany
(See Cosa Corp.)

Curlator Corp. 278
East Rochester, N. Y.

The Rando-Feeder and Rando-Webber for the production of non-oriented random webs in the making of non-woven fabrics.

Curtis & Marble Machine Co. 157
Worcester, Mass.

The SL selvage shear is designed to shear all types of filling yarns extending from the cloth selvage on either one or both sides. It is operated by compressed air with a hydraulic cylinder and the guiding of the cloth through the 6" cutting parts is said to be positively controlled at all times. It can be set to leave a residual fringe length of from 1/32 to $\frac{1}{4}$ ". Speeds from 60 to 110 y.p.m. are said to be possible, depending on the type of fabric. Models are available to take fabrics up to 120".

The M-125 cloth folder is air operated and is designed to perform satisfactorily up to 150 y.p.m. Clutches, cams, springs, gears and flat belts have been eliminated. Standard machine widths are 50, 60 and 72".

The company's portable rug shear has been re-designed and now weighs only 90 lbs. It has a large cleat-type carrying handle and a removable steering handle. The unit is enclosed in a fiber glass hood. Height of the cut can be adjusted by the regulating knob extending through the top of the hood. The revolver is 10" wide and has an adjustable revolving brush roll in front of the cutting parts to help brush up the pills for shearing.

Curtis & Marble's portable detacker

OFFICIAL REGISTRAR

Textile Bulletin again this year will be pleased to act as Official Registrar at the **American Textile Machinery Exhibition — International**. If we can be of service to you, please don't hesitate to call on us.

is designed to remove the stitches from doubled goods previously tacked for fulling. It operates on the mill floor parallel to and below the cloth as it is drawn to the scutcher or opening machine, and automatically unravels the thread as the cloth passes by. It is said to operate at speeds up to 110 y.p.m.

Custom Scientific Instruments Inc. 476
Kearney, N. J.

Accessory equipment for spinning and weaving. (D.N.A.)*

Cutler-Hammer Inc. 80
Milwaukee, Wisc.

Accessory equipment; electric control systems. (D.N.A.)*

Daily News Record 395
New York, N. Y.
Textile publication.

Daiwa Spinning Co. 1148
Osaka, Japan
(See Edward S. Rudnick)

Davidson, MacGregor & Co. Ltd. 1139
Great Britain
(D.N.A.)*

Davis & Furber Machine Co. 527
North Andover, Mass.

The new Model H ring spinning frame is designed for higher speeds and less downtime. The unit features a ballooning ring designed to prevent the yarn from slapping against the separator which causes intermittent friction and varied balloon mass. It also reduces balloon size and mass. An electric motor with magnetic clutch and electronic controls varies the frame's speed as the build of the bobbin progresses, as the angle of pull changes. This is said to even out tension permitting further increased speed. A new tension control is designed to relieve yarn tension at the bite of the draft roll and below. The larger package size obtained by the use of a longer bobbin is said to offer possible increase in weight from 15 to 45%.

Model L 84" three-cylinder woolen

Management profits from group plans tailored by the Pilot

Your operation will show a greater net profit from improved employee relations, increased competence of attracted personnel and reduced labor turnover. Write or wire

Pilot Life Insurance Company

GROUP DIVISION • GREENSBORO, NORTH CAROLINA
PILOT TO PROTECTION FOR OVER FIFTY-FIVE YEARS • O. F. STAFFORD, PRESIDENT



No Cameras

The A.T.M.A.'s Exhibition Committee has announced that visitors to the A.T.M.E.-International will not be allowed to take personal cameras into Convention Hall.

card features the new Model L-5A tape condenser with a traversing winding frame. The new heavy duty eccentric with redesigned linkage mechanism is said to have lifted previous card and eccentric speed limits.

A new synthetic sliver card, 60" wide with two cylinders and all metallic wire, is also being shown. The unit is designed to produce a well controlled sliver for high pile knitting machines both efficiently and economically.

A new fiber blending opener designed to incorporate several new features in stock openers will also be shown. Different degrees of stock opening to meet particular requirements of various mills is possible on the unit. In the main cylinder frame T-slot arches are used to permit a wide arrangement and adjustment of workers and also strippers. Lags running the length of the cylinder have pins mounted in a wooden base. The lags can be easily unbolted at any time to replace with lags of other size pins. Positive chain and sprocket drives permit an inexpensive means of changing speeds by changing sprockets. Variable speed units can be added if desired. Hinged covers on the cylinders can be opened for cleaning. An electric interlock shuts off all power. The machine can not start while the covers are open. The feed table can be racked back on track, away from cylinder for cleaning both units. It includes aprons and rolls operated by separate motor. A one-shot lubrication system feeds apron and roll bearings. All anti-friction bearings on the cylinder unit are equipped with grease fittings.

The new Davis & Furber napper features a pushbutton panel with tach dials. Pushbuttons operate the main drive motor and three motor controlled positive infinite variable speed unit for controlling separately the speeds of: pile rolls, counterpile rolls and position of tension control. The speed of each unit is indicated at all times by separate tachometers. When final, correct readings are recorded for each lot, setting these controls for similar runs can be accomplished by simply duplicating the tach readings. Energy is not changed or affected by changes in temperature or humidity. Controls for the initial tension device and the front idler brake are all located along side the pushbutton control panel.

Davison Publishing Co.
Ridgewood, N. J.
Textile directories.

424

Dean Products Inc.
Brooklyn, N. Y.

123

The Dean Panelcoil for a wide range of heating and cooling applications of interest to the preparatory, dyeing, drying and finishing divisions of the textile industry. Available in five standard widths from 12 to 29". Also available is a new heavy gauge embossed Panelcoil of 12-gauge L carbon steel or 14-gauge 316 L stainless steel for longer service life under severe operating conditions.

Deering Milliken
Research Corp.

124

Spartanburg, S. C.

On display will be the two latest models of machines for producing Agilon yarns. Model 2086 machine is intended for the production of singles yarns in a range from 15-denier monofilament to 100-denier. All yarns produced on this unit are considered stretch yarns. The Model 2110 machine produces both single and plied yarns in a range from 20-denier multifilament through 200-denier in single end. In addition to producing the plied yarns directly, Model 2110 can make either stretch or bulked yarns. As part of the continuous process this unit has a second heat setting and relaxing step which may be employed to achieve greater bulk at the expense of elasticity. The chief advantage claimed for the units are extremely low cost of processing and high quality of yarn produced.

R. B. Newton, Dr. N. C. Armitage, W. E. Moss, C. G. Evans, J. W. Whitworth.

Delerue & Cie.
Roubaix, France

1535

(See Interstate Textile Equipment Co.)

A.T.M.E.

Denman Rubber Mfg. Co. 304
Warren, Ohio
(See The Terrell Machine Co.)

Diehl Mfg. Co. 289
Somerville, N. J.

(1) Power transmitters (clutch-brake drives) for looms, spinning frames, roving frames, winders, etc. (2) Automatic tension control equipment. (3) Servo components for automatic control.

A. Roy Booth, Robert H. Hanson, Kenneth L. Trostle, John S. Wood, Alex J. Murphy, Franklin A. Yates, Edward P. Turner, Lorenz A. Wendel, Victor Marchuk.

Dixon Corp. 76
Bristol, R. I.

Spinning changeovers including: (1) Shaw to 2-apron Shaw. (2) Single apron Z spinning to 2-apron ZDR for drafting short or long staple fibers. (3) Casablanca changeovers for improved cotton and blended fiber performances. Spinning changeover components such as roll stands, gearing, new type steel rolls and other parts will also be shown.

Some of the new items are: (1) Tension weighting, eliminating all weights, levers, springs or magnets. The tension meter incorporated with tension weighting is designed to allow the accurate application of top roll pressure and the rechecking of pressure from spindle to spindle or from year to year. (2) Cavalla-Roth, a new fiber control method to improve breaking strength and evenness on long bottom apron drafting system. The new system is said to be applicable to all makes and models using the long bottom apron. (3) Two-apron Shaw, a minimum changeover to con-

A Look At The 1960's

AN interesting sidelight at the American Textile Machinery Exhibition in Atlantic City will be a "Look At The 1960's" seminar sponsored by Werner Textile Consultants. Scheduled to begin at 9:30 a.m. on Wednesday, May 25, at the Shelburne Hotel, the seminar will offer the following panelists:

Dr. William H. Miernyk, director, bureau of business and economic research, Northeastern University; topic: "The Economic Outlook for Textiles"; Walter Regnery, Joanna Cotton Mills Co., Joanna, S. C., "Vistas of Textile Technology"; Walter A. Kelly, Commercial Factors Corp., "Finishing Equipment Modernization"; and C. W. Bendigo, Werner Textile Consultants, "A Marketing Man's Outlook Toward Machine Modernization."

The seminar will conclude at noon, followed by a reception and lunch. Frank Leslie, vice-president of Burlington Industries, will be the luncheon speaker. His subject: "The Textile Merchant Then And Now."

A.T.M.E.

vert single-apron Shaw spinning to the 2-apron system.

Samuel Dracup & Sons Ltd. 1432
Yorkshire, England
Cop winding machines and weaving equipment. (D.N.A.)*

Draper Corp. 439
Hopedale, Mass.

Draper's exhibit, made up of five new looms, will feature three D.S.L. (Draper Shuttleless Looms) and two completely new models of the conventional type, the X-3 and the XB.

The shuttleless loom display will include: a 40" D.S.L. operating at 250 p.p.m. weaving a sports denim fabric, 3-harness weave 2/1 L.H. twill; a 50" D.S.L. operating at 238 p.p.m. weaving a spun rayon flannel, 4-harness weave 2/2 twill; and a 46" D.S.L. weaving a gauze, 2-harness plain weave, operating at slow speed to permit close inspection of the loom and its mechanisms.

Simplicity of design and manufacture is a feature of the D.S.L. The loom frame (front, back and top girt as well as the breast beam assemblies) consists of structural steel angle sections bolted to cast iron ends, thus facilitating easy replacement.

The harness motion of the D.S.L. features several departures from the conventional. For example, treadles are designed and mounted so as to pivot from the front of the loom, pro-

viding for quick and easy adjustments.

Identical harness cams are used in all harnesses, for all shades, with three different warp openings possible with the same harness cams.

A totally enclosed clock spring top is equipped with a gear and worm arrangement which permits adjustment of all springs simultaneously with a socket wrench from the outside of the housing. Pull-down of the harness frames is achieved through a system of harness rods and harness hooks, and this, combined with the clock top, provides a smooth positive harness action.

The wind-up motion again points up the requirements so necessary to reducing mill costs. Cloth rolls can be doffed simply, with little effort and without stopping the loom. The cloth roll is friction driven by metallized wind-up rolls which in turn derive their motion from the take-up roll. The cloth is diverted by guide rolls to provide for a 24" diameter roll of cloth.

A switch mounted on the left hand cloth roll stand stops the loom automatically before a roll of cloth builds up in diameter to the extent that it could cause damage.

The D.S.L. is also equipped with a center fork motion of the mechanical type. This center fork motion can be set to stop the loom whenever a broken pick occurs on a "single try" setting or it can be set to act on a "two-try" setting which is on the second pick break.

The loom is powered by a transmitter type drive which incorporates an electric motor, brake and clutch in one housing. To stop the loom automatically, signalling devices are pro-

vided. An indicator light, set on top of the right hand harness sheave bracket, shows when the loom is stopped.

A constant tension let-off is provided which permits no appreciable change in average warp tension from full to empty beam. Once the initial settings are made, little or no adjustment is required to maintain the proper yarn tension.

The tape motion is unique in design and, in all probability, is the principal difference between the shuttleless and the conventional loom. The tape motion, or the system by which the filling is drawn into and laid in the shed, consists of flat steel tapes, right and left hand, each equipped with a filling carrier. Filling is laid in cycles of two picks (one pick to a shed). These two picks resemble a hairpin with the open end at the left hand side and the bend at the right hand side. This produces a fabric which is smooth with a uniform selvage at the right hand side and a presentable selvage at the left. A selvage binder and a separate selvage supply contribute to keeping the left hand selvage tight and to locking the end of the pick. This device operates completely independent of the loom's harness motion. In effect, it is a full-time leno and can be set to lock every filling pick or every two picks.

Lubrication of the shuttleless loom can be handled automatically if desired. Many of the major mechanisms are completely enclosed. Sealed anti-friction bearings are also used. In other areas, impregnated wood bushings and rubber torsional bushings, requiring no lubrication, are used.

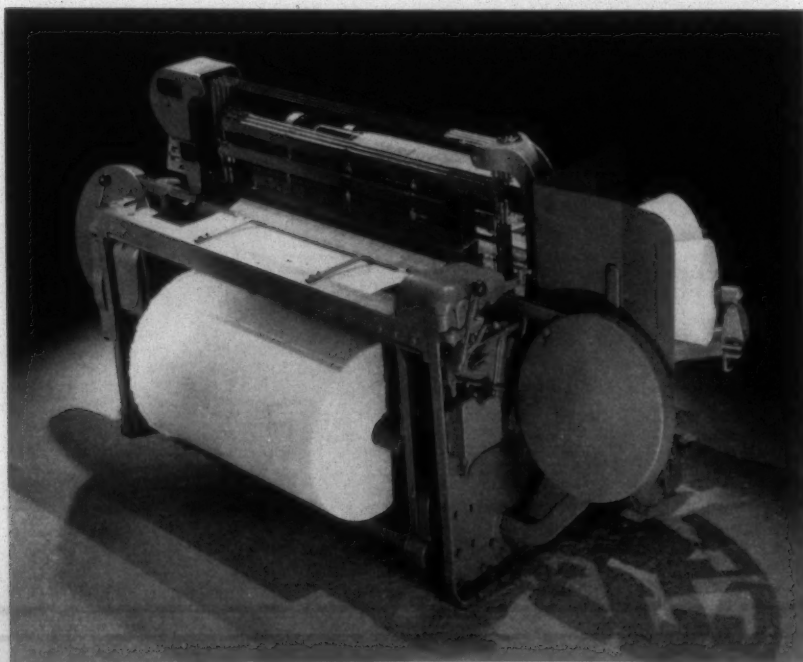
The elimination of shuttles, bobbins, pickers, picker sticks and virtually all leather parts, permit substantial savings in part costs.

All mechanisms on the loom are interconnected, with positively controlled timing of filling insertion, filling cutting, harness crossing, etc.

Most settings originate from a graduated hand wheel or "timing wheel," as some call it. Thus, a greater degree of stability in settings can be maintained which enables substantial reductions in fixing and maintenance costs.

The Draper exhibit will also include two conventional type looms. A 50" X-3 Model, operating at approximately 200 p.p.m., will be shown weaving a dress goods fabric of acetate yarn. Highly versatile, the X-3 was designed to weave all the fabrics normally woven on the X-2 and many synthetic fabrics commonly woven on the XD. With a weight increase of nearly 500 pounds over that of the X-2, added stability is achieved. The weight is distributed in such a way as to provide for smoother running as well as the ability to stand peak stresses at high speeds.

The X-3 can be furnished with clock spring top, up to 6 harnesses, cams on auxiliary shaft, or 4 harnesses with cam on cam shaft. It may also be



THE DRAPER SHUTTLELESS LOOM—Certain to receive a lot of attention at Atlantic City will be Draper Corp.'s shuttleless looms. Three will be on display: (1) a 40-inch unit operating at 250 p.p.m. weaving a sports denim; (2) a 50-inch unit operating at 238 p.p.m. on spun rayon flannel; and (3) a 46-inch loom on gauze operating at a slow enough speed to permit close inspection of the loom and its mechanisms.

furnished with 16-harness, 11-gauge dobby; or 20-harness, 3-gauge dobby. The loom on display will be equipped with 16-harness, 11-gauge dobby.

Since many of the parts and mechanisms of this loom are common to other Draper looms, some mills may attain greater weave room economy by reducing inventories of loom repairs and supplies.

The second new unit on display will be the XB Model. This loom will be shown weaving a suiting fabric, a blend of nylon acetate and viscose at approximately 166 p.p.m.

Designed primarily to weave heavy suitings, the XB incorporates many of the design features of the XP-2. The 72" XB on exhibit will be

equipped with cams on auxiliary shaft (2 sets), two sets of clock spring top, each of which features easy adjustment of spring tension from outside the housing.

The loom will be equipped with a center fork filling motion, Tru-Tension let-off and the Draper automatic filling magazine. The XB can be built with a dobby and with or without 2x1 box motion. Other equipment demonstrated on the XB will include the link type parallel, 28" beam head with adjustable yarn beam and an automatic lubrication system.

Draper will round out the exhibit with a display of its shuttles, bobbins, rings, spindles and loom accessories.

A.T.M.E.

Dudley, Garland & Jensen Inc. 757
Needham Heights, Mass.

Accessory machinery for finishing, gas burning system and singeing equipment.

Duesberg-Bosson of America Inc. 703

Jefferson, Mass.
Preparatory and spinning machinery for wool.

The Draper Shuttleless Loom

A QUESTION AND ANSWER SESSION WITH DRAPER CORP.

When and where did the first production units of the Draper shuttleless loom go into operation?

The first 45-loom production unit of the Draper D.S.L. shuttleless loom was started in a Southern cotton mill in early 1957.

Weaving what? And at what speeds?

Weaving Class B sheeting at a speed of 226 p.p.m. After a thorough trial of the machine at this mill, another 100-loom installation was made in the South to weave Canton flannel at 238 p.p.m.

How many D.S.L.'s are in operation now?

At this writing, there are approximately 1,100 looms running in eight different Southern mills producing such fabrics as Class B sheetings, Canton flannels, drills, muslin and percale sheetings, and print cloths.

How many D.S.L.'s are currently being produced? What delivery dates are being quoted?

Our production rate is approximately 100 looms a month, on a minimum lead time of six months.

Is the D.S.L. limited to these fabrics?

On an experimental basis, virtually all single-shuttle fabrics have been or are being run.

What constitutes a minimum order?

A minimum order is that which will give a satisfactory production unit as determined by the fabric being woven. About 100 machines is a representative average.

What's the price of the basic model D.S.L.?

The price varies from \$2,700 to \$2,900, depending on details of specification. This figure is approximately \$1,000 more than a comparable fly shuttle loom.

Have any design changes been made since the first units were introduced?

We have made minor design changes in the friction plates; in that part of the filling control mechanism that cuts and holds the filling; in the temples; and in the harness pull down rods.

What design bugs have cropped up since production of the first units?

Some mechanical problems have occurred, including (a) a rash of small bushing wear on parts made from materials supposedly not requiring lubrica-

tion; (b) substantial lay breakage in one installation (scattered and minor elsewhere); (c) some grooving and breakage of tape carriers as we search for the optimum hardness range; (d) some premature failure of an anti-friction bearing on the auxiliary shaft.

In view of the revolutionary differences that exist between the D.S.L. and conventional fly shuttle looms, has there been an unusual degree of skepticism among mill men as to the practicality of the D.S.L.?

We are not aware of any basic skepticism on the part of mill men. Some concern has been expressed over the acceptability of the left hand selvage for some end-uses, but this has not turned into a real problem. Tape wear, about which some mill men have worried, has so far not given us any trouble.

Will today's so-called conventional looms ever be completely replaced by shuttleless looms?

We doubt if conventional looms will ever be entirely replaced by the shuttleless loom because some end-uses do require a woven left hand selvage. Then too, we do not yet know what the ultimate practical width of this loom will be. We expect, however, that over a period of years the loom will be developed to the point where it will be able to replace a substantial portion of the whole single-shuttle weaving area.

A.T.M.E.

The Du Pont Co. 1235
Wilmington, Del.
A variety of fabrics made of Du Pont man-made fibers.

Durant Mfg. Co. 292
Milwaukee, Wisc.
(1) Electric pick counter system. (2) Doffmeter. (3) Lineal measuring machines. (4) Stroke and rotary counters.

The electric pick counter system being introduced is designed to give complete production information from all parts of the mill at one centralized location. In operation, a Durant Model D-6 contactor is placed on each production machine and wired to electric counters placed at one centralized location. Instead of registering the count at the machine, all counts are registered at the central control panel, thus giving an instant production reading from all parts of the mill.

La Duranitre, S. A. 803
Belgium

(Represented by Stellamcor Inc.)
(1) The Autocalibreur autoleveller with twin head delivery—feed: 2 heads with 5 ends up; draft: 7 to 10; delivery weight: 2 levelled slivers of 205 to 310 drams per 40 yards; delivery speed: 90 to 130 yards/min.; production: 220 lbs./hr. (2) High-speed gill box Record Drafter—feed: 6 heads, 12-18 ends up; draft: 7 to 10; delivery weight: 6 slivers of 31 to 82 drams per 40 yards; delivery speed: 90 to 130 yards/min.; production 220 lbs./hr. (3) The Super-Melangeuse blending machine with two gill heads and a maximum feeding capacity of 17 oz. Two slivers of 22 drams each are delivered.

Sauvage, Ducate.

Dynamatic Division, 298
Eaton Mfg. Co.
Cleveland, Ohio
Accessory equipment, magnetic friction

clutches and brakes. (D.N.A.)*

Eaton Mfg. Co. 298
Cleveland, Ohio
Accessory equipment. (D.N.A.)*

Edda International Corp. 1227
New York, N. Y.

(Representing Abney Mills, Vald Henriksen, A. B. Maxbo, Titan A/S)
(1) Maxbo shuttleless loom. (2) Titan warp tying machine equipped with a detector to stop the unit when a fault is detected in the lease on striped warps. (3) Excelsior reed-grinding and polishing machine. (4) The Henriksen line of dyeing and finishing machinery. (5) Loom supplies.

In the new Maxbo loom, the shuttle is replaced by an air nozzle from which a concentrated jet of air is ejected to blow the weft thread through the shed. This is designed to reduce the stress on the warp threads and to permit picking speeds of between 320 and 400 p.p.m., depending on the width and type of cloth. The yarn is fed from two large-capacity cheeses. Vibration is greatly reduced by the elimination of the mechanical picking motion. Thinner reed dents are possible because of the absence of the shuttle. This increases their lateral resilience, enabling knots to pass freely without entangling. The warp beam regulator operates automatically and does not require setting. The loom is available with electrically or mechanically operated warp detector.

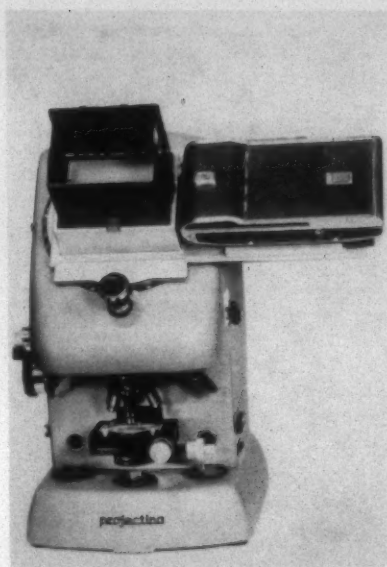
B. Gudjonsson, H. A. Nagel, R. J. Farr, H. H. Thacker, H. Lindquist.

Frank W. Egan & Co. 751
Somerville, N. J.

(1) Egan electric ironing machine for synthetic or woollen fabrics. (2) Egan coating machines and high velocity dryers.

Allan Schnitzer, Robert Sturken.

Engineered Plastics Inc. 301
Gibsonville, N. C.
Accessory equipment for spinning; and plastic materials. (D.N.A.)*



POLAROID PHOTOMICROGRAPHS — Instant photomicrographs are possible with this new Projectina Model 4014 unit equipped with a Polaroid attachment. The unit will be displayed by Hudson Automatic Machine & Tool Co., Booth 41.

Erhardt & Leimer 821
Augsburg, West Germany
(See Cosa Corp.)

Extremultus Inc. 388
Long Island City, N. Y.

Extramultus belting, designed to offer superior elastic properties without stretch.

Kenneth Tsunoda, George L. Pelli-
cer, C. Guy Rivers.

Fabrionics Corp. 18A
Huntington, N. Y.

(Representing Rothschild Messin-
struments)
Inspection equipment. (D.N.A.)*

The Fafnir Bearing Co. 282
New Britain, Conn.

Fafnir ball bearings and ball bearing power transmission units.

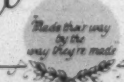
R. W. Powell, H. S. Frisbie, C. A. Berg, R. W. Parkinson, N. B. Bagger, C. W. Jones Jr., C. M. Thomas, J. P. Golden, R. B. Bramhall, E. M. Hayden Jr.

Fairchild Publications 395
New York City
Trade publications.

Famatex, G.m.b.H. 1331
West Germany
(See Robert Reiner)

Farmingdale Mfg. Corp. 717
Accessory equipment for looms. (D.N.A.)*

Carolina
LOOM REED CO., INC.



A Carolina Reed

Manufacturers of

ALL METAL CARBON AND STAINLESS STEEL REEDS

PITCH BAND AND METAL COMBS

DROP WIRE AND HEDDLE BARS

P. O. Box 1536

GREENSBORO, N. C.

Phone BR 4-7631

Farval Division
Eaton Mfg. Co.
Cleveland, Ohio

The Farval and Farval-Tanway centralized lubricating systems which are said to provide a positive mechanical method of dispensing oil or grease under pressure to a group of bearings from one central station.

Fife Mfg. Co.
Oklahoma City, Okla.

Various components of the company's line of cloth guiding equipment including various automatic guiding power units and sensing heads.

Fletcher Works Inc.
Philadelphia, Pa.

(1) The Power-Fab loom—a 5' loom designed to produce heavy government webbings at a speed of 250 p.p.m. Speeds up to 300 p.p.m. are possible on lighter fabrics, tapes and glass. It has 54" traverse warp beams, quills to 1½" diameter heads. (2) Multi-Fab loom—a 9' loom operating at 300 p.p.m. on light and medium fabrics, ribbons, tapes, elastics and glass. (3) Jumbo Duplex 22-spindle double twister featuring a 5-lb. package. It has a 6" ring, 9" traverse on the bottle bobbin or 10½" traverse on double tapered tubes. Gauge is 9" center-to-center, width 20" at the floor. (4) Duplex 20-spindle doubler twister—smaller than the Jumbo, having a 5" ring and a bobbin capacity of 2½ lbs. filament yarns or 1½ lbs. spun yarn. (5) High speed skein reel—made with one section with two fly wheels. It can be divided into multiple sections. It has a 44/9" fly periphery and operates at 575 y.p.m. average yarn speed.

E. T. Taws, E. T. Taws Jr., F. S. Claghorn, B. Rosell, J. Marshelonis.

Forte Engineering Co.
Norwood, Mass.

Moisture analyzers: (1) Model D determines the average moisture content in an entire ball of wool top weighing up to 24 lbs. (2) Model K gives the average moisture content in a 20-oz. sample of bulk fiber. (3) Model F is designed to determine the moisture content in an entire cone or a full skein of yarn.

Foster Machine Co.
Westfield, Mass.

(1) A new cone winder. (2) The Lindly Dyna-Micro-Gage, a photoelectric testing device designed for the continuous monitoring of spun and filament yarns, and for checking the average denier of filament yarns, and the uniformity of spun yarn.

E. C. Connor, P. H. Farmer, E. P. Dodge, C. H. Amidon, F. F. Strange, R. B. Kendall, S. A. Burke, E. Davis, J. A. Moore, J. B. Davenport, G. W. Mallory, H. E. Swift, C. A. France, E. H. Ely.

The Foxboro Co.
Foxboro, Mass.

(1) The Dynalog recorder which measures pH without preamplifier. (2) A new 160-square-inch diaphragm motor for pneumatic loading. (3) A laboratory recorder which provides, on a single chart, records of temperature and dew point. The unit measures dew point with a Dewcel element rather than the conventional wet bulb. (4) Complete instrumentation for automatic chemical dilution. (5) Stretch recording and control, using Type 16A pneumatic speed transmitters, a ratio controller and a pneumatic current controller to adjust motor speed to maintain desired per cent stretch.

T. A. Jones, E. R. Tims, S. C. Alexander, A. S. Warren, W. Bishop, G. E. Clark, J. R. Hileman, B. S. Winchester Jr., A. R. Hicks, C. W. Hartman, R. E. Beers, C. L. Williams, K. L. Barton Jr., W. D. Carty, J. S. Coulter, R. M. Glass, W. H. Ridley, A. Grant.

Ernest Frankl Associates
New York, N. Y.

(Representing Sant' Andrea Novara, Svetema, Jakob Jaeggli & Cie., Jakob Mueller, Tattersall & Holdsworth's, Messera S.p.A., Trutzschler & Co. See individual listings.)

Ernest L. Frankl, Gunther Frankl.

G P E Controls Inc.
Chicago, Ill.

Accessory equipment for finishing machines. (D.N.A.)*

A.T.M.E.

Gabb Special Products Inc.
Windsor Locks, Conn.
Accessory dyeing equipment.
(D.N.A.)*

Gaston County Dyeing Machine Co.
Stanley, N. C.
Dyeing and drying machines.
(D.N.A.)*

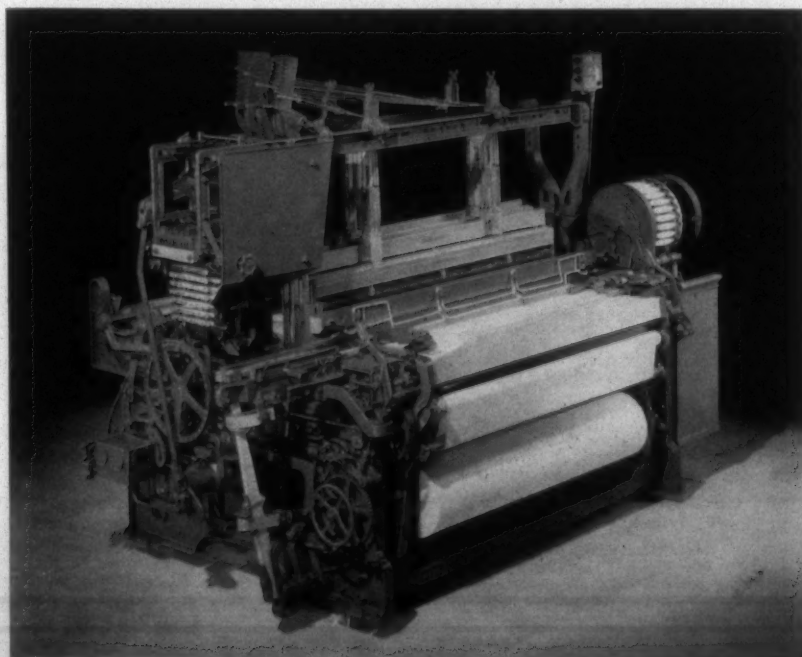
General Dispersions Inc.
Paterson, N. J.
(See General Plastics)

General Electric Co.
Schenectady, N. Y.

A full line of electrical and mechanical speed drives including: Kinatrol eddy-current coupling speed variator for small range drives, individual motors, finishing machines, drive fans, slashers, warpers and beamers; Kinamatic and Parmatic speed variators; Polydyne drive designed to provide stepless adjustment of output speed from an a.c. motor.

General Plastics Corp.
Paterson, N. J.

(1) Teflon coated dry cans, thermo panels and other equipment benefiting from this coating. (2) Fabrics



DRAPER 50-INCH X-3 MODEL—In addition to its shuttleless looms, Draper Corp. will also have on display at Atlantic City this 50-inch X-3 Model. Operating at 200 p.p.m., it will be shown weaving a dress goods fabric of acetate yarn. The X-3 is designed to weave all the fabrics normally woven on the X-2 and many synthetic fabrics commonly woven on the Model XD.

A.T.M.E. —

finished with nylon dispersions produced by General Dispersions. (3) A special compound for spraying on to fabrics to prevent their slippage and fraying when being cut or sewn.

General Radio Co. 710A
West Concord, Mass.
Testing equipment. (D.N.A.)*

David Gessner Co. 246
Worcester, Mass.
(1) New Gessner shearing machine.
(2) 30-roll Hi Tore napper.
John P. Franklin, Theodore A. Dourdeville, Richard C. Franklin, Richard A. Herard.

Ateliers de Construction 854
Gilbos
Belgium
(Represented by Stellamcor Inc.)
(1) High-speed roll winding machine designed to produce super sized cross-wound packages at the same efficiency as a regular cross winder. It is especially designed for producing very large cross-wound packages of cotton, wool, linen, jute, spun rayon and other yarns. The unit is equipped

with: automatic diameter stop motion; vibration suppressor on each spindle; dustproof ball bearings enabling operation of 10,000 hours without lubrication; special yarn conditioning device that adds the desired moisture to the yarn during winding. Maximum package diameter is 11". Maximum speed is 825 y.p.m. (2) Cross Winder U. C. from skeins to cones—a single sided unit with 12, 16, 18 or 20 spindles. It is equipped with: a dual speed motor and speed regulator which make possible speeds of 110 to 525 y.p.m.; tension control that guarantees even tension for even cross winding; automatic stop motion to stop the unit when ends break or the yarn supply runs out; patented clutch arrangement enabling immediate stopping without broken ends.
Mr. Gilbos.

George A. Goulston Co. 642
Boston, Mass.
Fiber lubricants.

Grinnell Corp. 51
Providence, R. I.
(See American Moistening Co.)

Thomas Halton's Sons 711
Philadelphia, Pa.
Weaving accessories. (D.N.A.)*

Hanseatische Motoren G.m.b.H. 1032
West Germany
(See Texplant Corp.)

Harnisch 663
West Germany
(See Lenkotex Co. Inc.)

Hayes Industries Inc. 413
Jackson, Mich.
Aluminum beams, weaving equipment. (D.N.A.)*

Hayssen Mfg. Co. 474
Sheboygan, Wisc.

Heany Industrial 7
Ceramic Corp.
New Haven, Conn.
Heanium thread guides and tension devices.
A. O. Pieper, Herman Boveri, R. L. Carroll, R. P. Bennett.

Heinz Hergert Machine Co. 1318
West Germany
(Represented by Woolart Mills)
Finishing equipment for woolens. (D.N.A.)*

J. Hengstler K-G. 929
Zahlerfabrik
West Germany
Accessory equipment; counters. (D.N.A.)*

Vald Henriksen, I/S 1227
Copenhagen, Denmark
(See Edda International)

Herr Mfg. Co. 69
Buffalo, N. Y.
(1) Type M conical rings designed with seam lubrication both for manual and automatic lubrication. (2) Herr flyers for all types of yarns for up-twisting.
Hyatt B. Atwood, Robert M. Leach, William W. Woodward, James McLean, William K. Anderson Jr.

Herzog-Auerbach Co. 950
West Germany
(Represented by Vanderburgh & Co.)
Complete line of high speed braiding machines for producing round, flat and all types of special braids—also heavy ropes and hawsers.
A. G. Herzog, K. G. Richter, H. H. Quell, R. Wiemer.

Hiroshima Precision 1034
Machine Works
Hiroshima, Japan
(Represented by Mitsubishi International Corp.)

MORE drying can "MILEAGE"

I.C. TEFLON* COATINGS STILL RUNNING AFTER FIVE YEARS!

Many mills report that TEFLON* coatings, applied by I. C., have been in continuous operation on drying cans for over five years and are still giving fully satisfactory service . . . positive proof that I. C. coatings last longer and cost less.

I. C.'s tough, residue resistant TEFLON* finishes are guaranteed to give more production "mileage" on your equipment. I. C. also specializes in the application of non-corrosive tank linings. Next time, specify INDUSTRIAL COATINGS.



*DuPont's TFE Fluorocarbon Resin

INDUSTRIAL COATINGS, INC.

PIONEER TEFLON APPLICATORS IN THE SOUTH ATLANTIC STATES
Box 1567 Greenville, S. C. TEL. Cedar 5-3573

Hobbs Mfg. Co.
Worcester, Mass.

(1) The Vers-A-Wind drive, a new d.c.-powered line of winding and tension control systems developed specifically for tension control of all types of sheetings. (2) Center Loc core holders, developed for holding standard sizes of paper cores to either unwind or winding shafts. (3) The Hobbs controlled horsepower winder.

H. K. Lambert, G. B. Clay.

Holdsworth Mfg. Co.
Pawtucket, R. I.

High-speed Super Gill used in the processing of worsted and worsted type synthetic yarns. (2) High-speed Super Gill with automatic ball doffing unit installed. (3) Super Gill with auto-leveller device designed to automatically reduce any irregularities of feed weight and provide for delivery of a constant level sliver at high production.

Charles F. Curran Jr., Walter E. Stearns, Harold Kazarian, A. Wilbut Hayden, Douglas D. MacDonald.

R. H. Hood Co.
Philadelphia, Pa.

(1) Hood open doubler used in the Perlok process of tow to top conversion. (2) Coilers used in the Perlok process. (3) Hood special process Evenized aprons for Noble combs, gill boxes, french combs and converters. (4) Accessories for the combing industry.

Henry G. Hood, Robert H. Hood II, William F. Gill, William E. Christensen.

Ateliers Houget
Belgium

Type R.T.F.I. ring frame for condenser yarns equipped with only 44 spindles. The gauge of the frame is 7", the ring diameter is 5½" and the lift is 17½". It is equipped with R.T.F. spindles for reducing spinning tension. Advantages claimed include: higher spindle speeds—5,050 r.p.m.; reduced ends-down per 1,000 spindle hours; bobbin weight increased by 40%. Available ring diameters are: 2¾, 3, 3½, 4-22/32, 5, 5½, 6½ and 7". The frame is driven by a variable speed motor, keeping the balloon tension and spinning tension constant. The twists can be set by a variator without changing any gears. The twists can be modified in the ratio of 1-to-4. The speed of the frame can be set immediately by the motor, so no gears or pulleys have to be changed with the exception of the draft gear.

Messrs. Van Ditscuizen, Vervenne.

Howa Machinery Ltd.
Osaka, Japan

(Represented by Mitsubishi International Corp.)

Howard Bros. Mfg. Co.
Worcester, Mass.
Card clothing. (D.N.A.)*

Hudson Automatic Machine & Tool Co.
Union City, N. J.

Two models of its Projectina testing instrument for projected microscopic view 7X to 2,000X. Model 4014 is available with a special back which accepts the Polaroid Land camera for making instant photomicrographs. Model 4016 is a double projector for checking two samples of fabrics, yarns, etc., side by side.

C. A. Hepp, H. Peter, H. Koerner.

Rodney Hunt Machine Co.
Orange, Mass.

(1) A newly designed rapid bleaching range for continuous open width bleaching. (2) A new paddler incorporating a new roll and new pressure system for high extraction. (3) A new spreader roll said to incorporate a new principle of operation.

J. Remble, M. G. Hopkins, D. A. Kuniholm, H. L. Daub, V. L. Wilkinson, John Hayes, Lawson Hayes.

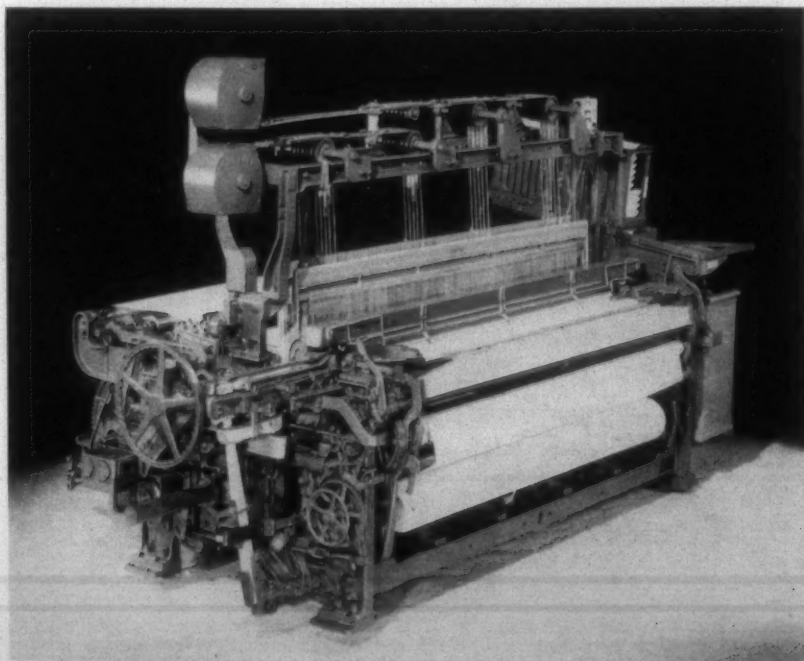
Hunter Fiber Machine Co.
Los Angeles, Calif.
(See James Hunter Machine Co.)

James Hunter Inc.
Mauldin, S. C.
(See James Hunter Machine Co.)

A.T.M.E.

James Hunter Machine Co.
North Adams, Mass.

(1) Model AN bale blender designed to provide complete automation from bale to opening room. The blender automatically feeds small tufts of cotton or other type fibers from all bales laid down behind each Fiber Meter. These tufts are from the complete cross-section of each bale. (2) Model 480-AW Fiber Meter is designed to produce maximum accuracy of dump with minimum variation. (3) Model AHC Imperial card or garnett feed. (4) Hunter 1-cylinder 30x60" single doffer garnett for garnetting virgin synthetic fibers to produce well opened stock for batt making equipment. (5) Model 7-A Huntermatic cross lapper, 67x60" with patented clutch reverse mechanism. It is said to produce even side to side weight of batt on the floor apron by eliminating one fold in the web travel. (6) Pneumatic compressor head with floor apron. (7) Wind-up device with aluminum drums to cut down weight. (8) Web forming machine designed to produce random web constructions at better than average rates of production. (9) Model 9 65" Hunter Fiber Locker—a needle felting machine designed for high speeds and with needles arranged to produce a variety of materials from ladies' wear through blankets to heavy duty filter bags. (10) Hunter continuous high temperature wet processing machine with pressure seals which permit continu-



DRAPER 72-INCH XB MODEL—Rounding out Draper Corp.'s loom exhibit at Atlantic City will be this 72-inch XB Model running at 166 p.p.m. on suiting fabric. The unit on display will be equipped with cams on auxiliary shaft (two sets), two sets of clock spring top, each of which features easy adjustment of spring tension from outside the housing.

A.T.M.E.

ous treatment of fabrics at temperatures well above 212° F. (11) The Hunter Psychrometer and the new Thermotes Rhodioceta which is designed for the determination of heat effects on fabrics or the dyestuffs or finishes that have been applied to fabrics. (12) Expanders.

James H. Hunter, Richard A. Hunter, William F. Leineweber, A. V. Moody, H. F. Creegan, R. L. Plumb, Ernest G. Cannity Jr.

Hyatt Bearings Division 275
Genera Motors Corp.

Harrison, N. J.

A complete line of anti-friction bearings for textile machinery including bearings for looms, cards, drawing frames, twisting and spinning equipment and finishing machinery. Cut-away sections will be shown.

J. R. Gilmartin, E. P. O'Neill, T. E. Husted, C. C. Wardell, G. Baxley, E. Maurushat, M. E. Otterbein.

Industrial Dryer Corp. 680
Stamford, Conn.

H-W conditioner for conditioning and twist setting synthetics, woolen, worsted, cotton, glass yarn.



**HARDWOOD
WEAVE
ROOM
SUPPLIES**

Pulldown
Jacksticks
& Parts
Laminated
& Hickory
Picker Sticks
Dobby &
Harness Sheaves
Binders
Shuttle Pegs,
Round & Square
Loom Flags
Race Boards

● Leather Products
● Castings,
Aluminum
& Brass
● All Wooden
Loom Parts

Prompt Service & Best Quality
Write for Samples and Prices on
Binders covered with Armstrong
Composition No. CN889.

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COMPANY, INC.**
Greenville, S. C.
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P. H. Friend, J. R. Tutt, R. G. Leininger, F. W. Caesar.

International Sales 1531
Management Co.

Charlotte, N. C.

(Representing Ernest Scragg & Sons Ltd.)

Winding and spinning machinery.
(D.N.A.)*

Interstate Textile 1535
Equipment Co.

Charlotte, N. C.

(Representing Delerue & Cie)

The Delerue Rocket winder which produces up to 9-lb. packages of uniform density. The 6-spindle winder is designed to operate at speeds up to 1,100 y.p.m. at a high crossing ratio.

Izumi Bobbin Co. 1148
Osaka, Japan

(See Edward S. Rudnick)

Jakob Jaeggli & Cie. 1324
Switzerland

(Represented by Ernest L. Frankl Associates)

Beam jacks for weaving, dyeing and knitting machinery.

The Johnson Corp. 392
Three Rivers, Mich.

(1) Type S self-supporting rotary pressure joints with assembly plates and syphon elbows. (2) A complete line of Type L-JSP (rod supported) pressure joints with assembly plates and syphon elbows. (3) Solenoid valves for automatic or remote flow control of all liquids and steam up to 400° F. (4) Johnson instant steam water heater which uses steam as the heating medium. (5) Compressed air separators and aftercoolers.

W. R. Monroe, T. O. Monroe, J. E. Dal Ponte, R. W. Gotschall.

Johnson Service Co. 88
Milwaukee, Wisc.
(D.N.A.)*

Jomac Inc. 43
Philadelphia, Pa.

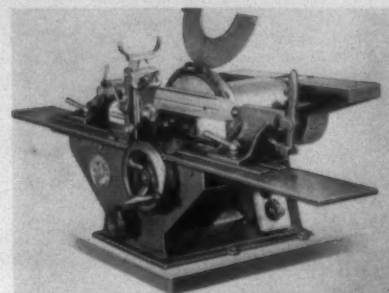
Industrial textile rolls.

Howard E. Eldridge, Jack Evo, Jack Seeburger, Eric Engdahl, Richard Hughes, Ray Craven, Frank McLaughlin, Charles Gibb.

The Journal of Commerce 807
New York City

Jungfrau Inc. 1208
New York City

(Represented by Fritz Buser Engineering Works, Luescher Bros.)



SHUTTLE TRUING MACHINE — Lenkotex Co. will have on display this shuttle truing machine by Harnisch, West Germany.

Albert Jurgens 820
West Germany

Weaving machinery. (D.N.A.)*

Kanegafuchi Machine Co. 1148
Osaka, Japan

(See Edward S. Rudnick)

Kennett Equipment & 11A
Machinery Division,

National Vulcanized Fibre Co.

Kennett Square, Pa.

(See National Vulcanized Fibre Co.)

William Kenyon & Sons 79
Perth Amboy, N. J.

(1) Kennylbond spinning tape. (2) Kenyon tape bonding machines. (3) Kenbrake clutch and spindle brake. (4) Kenyon card drive.

O. E. Butcher, J. W. Davis.

Kettling & Braun 836
West Germany
(See Cosa Corp.)

Kidde Textile Machinery Corp. 478
Bloomfield, N. J.

(1) Model 144B tricot-type warper for 21x21" spools. (2) Model 149C tricot-type interchangeable warper for 32" diameter by 42 and 50" spools. (3) Model 146B yarn storage accumulator. (4) Model 158A heavy duty beamer for 36x54 1/4" beams. (5) A 60-end demonstration unit of warping creel.

W. J. Behr, H. W. Ruddick, J. H. Flemming, E. L. Herbert, D. W. McCoy, A. W. Post.

Kirkman & Dixon 277
Machinery Co.

Greenwood, S. C.

Preparatory and waste machinery.
(D.N.A.)*

Klauder Weldon Giles 707
Machine Co.

Philadelphia, Pa.

Kluttz Rings Inc. 753

Gastonia, N. C.

Display of spinning rings and acces-

sories. Mechanical demonstration of wear factors presented to ring surfaces by Lubricase treatment.

John H. Foard, Hugh K. Smith, Thomas H. Watson, W. Paul Taylor, David Yoder.

Knotex Maschinenbau, 900
G.m.b.H.

West Germany
Preparatory equipment, warp tying machinery. (D.N.A.)*

Eduard Kusters 846
West Germany

The Aquaroll water mangle Type 75 will be shown. Features cited for it include: water pressure system which allows for absolutely uniform nip pressure; maximum water extraction results (less than 50% residual moisture in the case of pure greige cotton); Perlon fiber squeezing bowl with surface resilience which permits treatment of any fabric without harmful effect to its texture. Maximum speed possible with the unit is 200 y.p.m.

The Vibrotex continuous backgreay washing machine to be displayed is a combination of the Vibrotex washer and the Aquaroll water mangle. The unit is applicable to various processes, notably the continuous washing of backgreys (undercloth), and the final rinse and squeezing when installed as the last unit in a continuous open width washing range. Maximum speeds permissible are between 80 and 100 y.p.m. Maximum width is 70".

Eduard Kusters, Wilhelm Laudenschach, Ernest Hannen, Hans Kutz.

O. Lambert S.P.R.L. 1432
Belgium
(Represented by Wilson & Longbottom Ltd.)

W. T. Lane & Bros. Inc. 387
Poughkeepsie, N. Y.

A complete line of containers for the textile industry including doff boxes, mill trucks, steamers, hampers and other materials handling receptacles.

R. T. Lane, J. P. Foran, J. M. Baker.

Lansdowne Steel & Iron Co. 715
Morton, Pa.
(D.N.A.)*

Lebocey Needle Co. 1401
France
(Represented by Mac M. Rothkopf & Co.)

Leesona Corp. 197
Providence, R. I.

(1) Unifil loom winders in operation on X2 and XD looms, demonstrating the weaving of cotton and synthetic fabrics with Unifil. (2) Twisters-con-

ers will be exhibited to demonstrate the single step twisting and coning of large 8-lb. cones of filament and stretch yarn suitable for use as a supply to the loom winder or other processes. (3) Take-up machinery to demonstrate the production of large precision wound packages of filament yarn, taken up directly from a spinning process. (4) Roto-Coner drum winder with attachments for producing, at high speed, large cones that can be used to supply the loom winder. (5) Instruments to demonstrate the most modern methods of yarn testing during production.

F. P. Barrie, F. J. Barrows, J. Bowler, J. R. Breen, J. A. Freed, K. H. Gibson, W. V. Goodhue, Robert Lee-son, G. Mitchell, E. C. Parish, Robert S. Pennock, W. J. Quinn, C. E. Sullivan, R. H. Wallace, J. V. Keith, H. R. Kennedy, H. D. Kerman, R. Waugh, A. D. Weston, J. J. White, R. Aghion, F. Ernoult, L. Ffrench, R. P. Newell, H. Richardson, J. A. Nasmith.

Lenkotex Co. Inc. 663
New York City

(Representing Harnisch, Industrie Saccardo, Spintex Spinnerei-Maschinenbau, Mann Maschinenfabrik, K. G. Mayer & Co.)

(1) Spintex roller bearing spindles for spinning and twisting. (2) Mann spinning and twister rings. (3) Saccardo paper tubes for spinning and twisting, paper bobbins for roving frames. (4) Harnisch temple rolls, rings and parts for looms. (5) Harnisch shuttle truing machine. (6) Mayer stroboscopic speed measuring and process observation instrument. (7) Lenkotex plastic pin strips for high-speed drawing frames.

V. Lindner, Egon Stiehl.

A.T.M.E.

Lestershire Division, 1231
National Vulcanized Fibre
(See National Vulcanized Fibre Co.)

Lincoln Engineering Co. 307
St. Louis, Mo.
Mill maintenance equipment.
(D.N.A.)*

Lindly & Co. 649
Mineola, N. Y.
(See Foster Machine Co.)

Link-Belt Co. 94
Chicago, Ill.

(1) The RS P.I.V. variable speed drive designed with ratings up to 50 h.p. (2) The motorized differential P.I.V. with automatic controls. (3) Link-Belt's self-aligning bearing line. (4) Silent and roller chain drives.

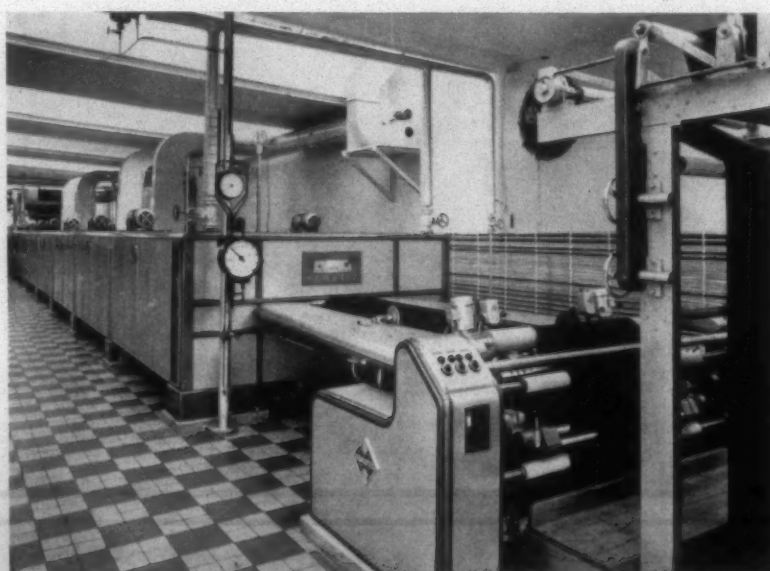
H. F. Livermore Corp. 322
Allston, Mass.
Weaving accessories. (D.N.A.)*

Lockwood-Greene Engineers Inc. 86
New York City
Reception booth.

S. B. Lincoln, S. B. Roberts, H. M. Rogers, J. Z. Robinette, T. O. Ott, W. R. Simpson.

Lowell Industries Inc. 322
Lowell, Mass.

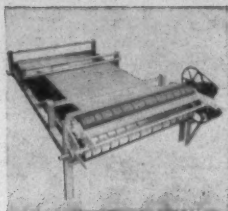
Lowell Technological Institute 817
Lowell, Mass.



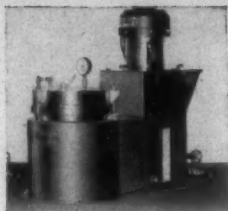
SINGLE-LAYER TENTER—This Famatex single-layer tenter, to be shown by Robert Reiner, is described as a versatile unit designed for the tentering, drying and heat setting of any woven or warp knit fabric of either natural or man-made fibers. The tenter is made by Famatex G.m.b.H., West Germany.



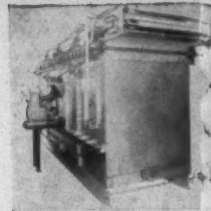
Carbonizing Range



Cloth Storage Scray



SPT Laboratory Dye Kettle



90 yd. Sectional Acid Age
(Stainless)

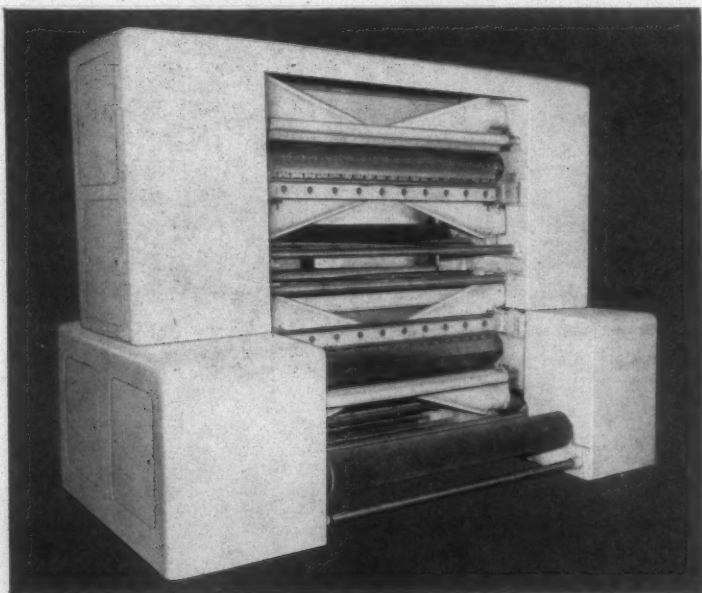
Three Great Names in One

Triple

Everything in Finishing Equipment for

See our new

Vertical High Speed Cotton Shear



in operation at the
American Textile Machinery
Exhibition International
Booths 266-273

Watch our new Parks & Woolson Vertical Shear, with automatic seam jumper, run better than 200 yards per minute — *with high efficiency*. Note also how much valuable floor space is saved by this compact machine's vertical construction. It's a feature of our exhibit — but *only one* of the high-value cost-saving mechanisms we have to show you.



Unique Advantages Typify Each Machine In Our Complete Range

Photos or catalog sheets briefly describing all R & L machines we list are available on request. Ask at Booths 266-273 — bring us your finishing problems for expert counsel.

RIGGS & LOMBARD, Inc. LOWELL, MASSACHUSETTS
Cook Machine Co., Inc. LOWELL, MASS. (Subsidiary)
Parks & Woolson Machine Co. SPRINGFIELD, VT. (Division)

Pennsylvania Area:

A. HAROLD ZAYOTTI, JR.
P. O. Box 125, Riverton, New Jersey

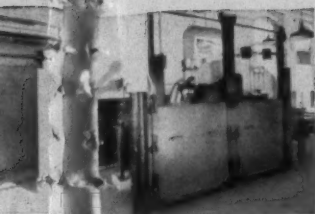
Chicago Area:

ALBERT R. BREEN
80 East Jackson Blvd., Chicago, Illinois

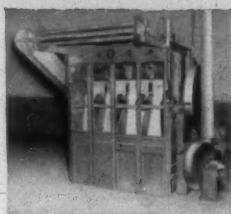
Southern Office:

L. T. PARKMAN · G. W. PIERCE
227 West Third Street, Charlotte, N. C.

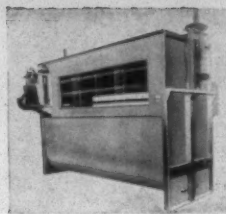
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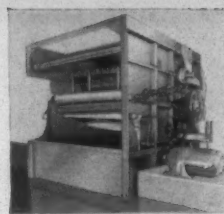
Yarn Steamer



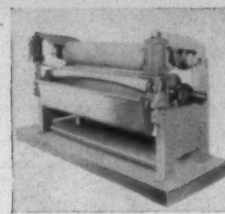
Semi-Continuous Crusher



Wash-O-Matic Bleacher



Stainless Steel Washer
for Endless Felt Goods



Light Duty 2 Roll Padder

Strength • Triple Service

*"From Loom
to Delivery"*

Woolens, Worsted, Cottons, Synthetics

RIGGS and LOMBARD, Inc., Lowell, Mass.

Carbonizing Ranges—Cloth
Compacting Machines
Crushers—Continuous
Crushers—Semi-continuous
Dry Cleaners—Derby—
Continuous
Dye Becks
Dye Kettles—Piece
Dye Kettles—Rug
Dye Kettles—Sample
Dye Kettles—Stock—
Hy-Temperature

Dye Kettles—Stock—Standard
Temperature
Extractors
Fulling Mills—Cloth
Fulling Mills—Endless Felt
Jigs—Progressive
Laboratory Machines
Padders
Pails
Poteyes
Pusher Mills
Reels
Rolls—Fulling Mills—Rubber
Ring Type

Rolls—Fulling Mills—
Vulcanized Rubber
Rolls—Miscellaneous
Rolls—Vulcanized Rubber
Rolls—Wood Lagged
Shrinkproofing Machines
Soap Distributing Systems
Soapers—Rope
Soaping Machines—Open
Width
Soaping Machines—Rope
Special Machines
Squeeze Roll Extractors
Tanks—Size Mixing

Tanks—Storage
Top Dyeing Machines
Trucks—Cloth
Trucks—Dye
Trucks—Pin
Washers—Caustic
Washers—Continuous
Washers—Dolly
Washers—Endless Felt
Washers—Open Width
Wringers
Yarn Steamers

Cook MACHINE CO. INC., Lowell, Mass.

A Subsidiary of Riggs and Lombard, Inc.

Agers & Steamers
Bleach House Washers
Bleaching J Boxes
Compensators
Continuous Cloth Feeds
Cylinder Dryers

Desizing Ranges
Detackers
Detwisters
Dye Ranges
Finishing Ranges
Folders

Padders
Plisse Printing Ranges
Roll Extractors
Rope Bleach Ranges
Saturators, Open Width
Scutchers

Selvage Uncurlers
Singers
Slack Washers
Tow Plaiters
Washers, Open Width
Winders
Boil-Off

PARKS & WOOLSON MACHINE COMPANY, Springfield, Vt.

Division of Riggs and Lombard, Inc.

CLOTH:
Atomizers
Bailing Brushing
Batchers
Blades (Shear)
Blade Beaters
Boarding
Boil-Off
Button Breakers
Buffing
Burling Ranges
Carbon Duster Dry Milling
Conditioning
Conveyors
Cooling
Counters (Measuring)
Crabbing
Dewing
Decating (Vacuum)
Delustering
Despecking
Doubbling
Dusting
Edge Trimming
Embossed Shearing
Examining

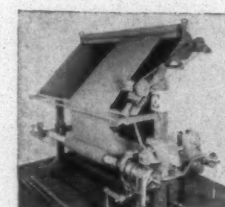
Expanders
Folders
Gigging
Grading and Inspecting
Gray Goods Shearing
Guiders
Ink Trademark
Inspecting and Trimming
Label Stamping
Laundry Napping
Loop Cutters and Shearing
Lustering
Monte Steaming & Air
Cooling
Marking
Measuring
Mending Tables
Metal Finders
Moth Proofing
Napping
Packaging
Perches
Piece End Sewing
Pile Fabric
Plaiters and Plaiting
Plush

Polishing
Power Perching
Presses (Apron Type)
Pumicing
Printing Selvage
Rerolling
Rewinders
Rolling
Sanding
Serays and Cradles
Semi-Decaters
Shearing
Shrinking
Silk Finishing
Slitting and Roll Winding
Sponging
Spot Proofing
Stamping
Steaming
Sueding
Synthetic
Tacking
Teasel Gigs
Tenter Raising
Thread Cutting
Tigering

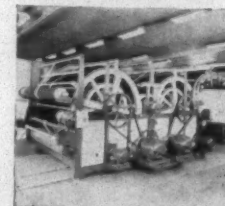
Towel Trimming
Trade Mark
Transfer
Trimming
Tubing
Tubing and Doubling
Tubular Finishing
Unrolling
Velour Raising
Velvet
Waxing
Winding
ALSO:
Carpet Finishing
Felt Finishing
Fur Finishing
Grinders
Shear Blades
Nappers
Cloth
Knit Goods Finishing
Trico
Hosiery Napping
Sueding
Leather
Rubber



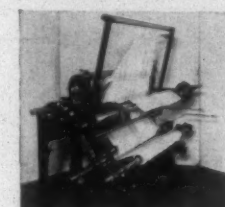
J Box (Dupont type)



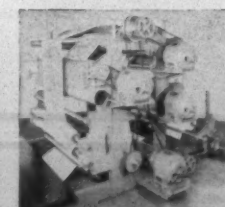
Veritex Inspecting Machine



Ten Contact Teasel Gig &
Wet Brushing Machine



Universal Tubing Machine



Vertical Trimming or Greige
Goods Shear



Three great makers of finishing equipment combine their experience and facilities to help you improve and increase your production for profit. Write now to consult our unequalled composite engineering service.

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A.T.M.E. —

Luescher Bros. 1208
Switzerland
(See Jungfrau)

Maag Bros. 714
Switzerland
(See Trumeter Co.)

Machbeth Daylighting Corp. 389
Newburgh, N. Y.
A variety of lighting equipment for color matching.

Machinecraft Inc. 118
Pawtucket, R. I.
(See Cotton-McCauley & Co.)

Robert A. Main & Sons Inc. 679
Wyckoff, N. J.
(1) Picker teeth for picking, opening and shredding all types of materials. (2) Picker pins, special lags and lagging for opening all types of materials. (3) Composition slat aprons (plain or spiked) suitable for wet, caustic and acidic conditions.
Robert A. Main, Charles A. Brautigam, Sutton M. Ebert.

Chr. Mann Maschinenfabrik 663
West Germany
(See Lenkotex Co. Inc.)

Marlin-Rockwell Corp. 606
Jamestown, N. Y.
(D.N.A.)*

Marshall & Williams Corp. 559
Providence, R. I.
(Representing Rudel Machinery Co.)
Featured will be the company's smallest and its heaviest tenter frames. Also shown will be a complete line of tenter frame drive units in 5 to 100 h.p., all torqued for the proper load demand. A complete line of tenter clips will be shown. Some 15 styles will be on display, together with various combinations of jaws, controll-

ers, bodies, etc., including the two-piece clip.

John G. Nash, Fred H. Land, James H. Love, Albert J. Marshall, Edward E. Ford, William C. Brown, Fred Hyatt, William Tomlinson.

Matrix Controls Co. Inc. 294
Somerville, N. J.

Finishing, measuring, inspecting and laboratory instruments.

A. B. Maxbo 227
Norrköping, Sweden
(See Edda International Corp.)

K. G. Mayer & Co. 663
West Germany
(See Lenkotex Co. Inc.)

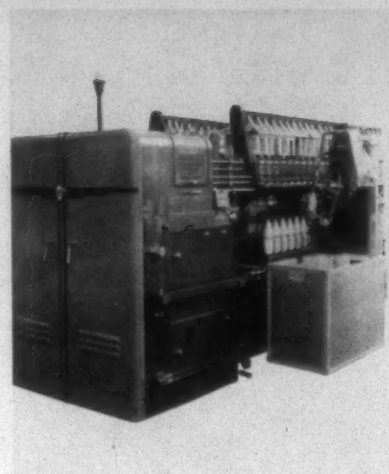
Edward J. McBride Co. Inc. 1152
Philadelphia, Pa.
Yarn brokers.

Officine Meccaniche 1149
Mennegatto
Monza, Italy
(Represented by Atkinson, Haserick & Co.)

Mettler Instrument Corp. 381
Hightstown, N. J.
(1) Type H-23 C10/13 yarn balance features three separate scales enabling the direct reading of grams, tex-units and denier. (2) Type K-7 balance is equipped with a scale reading in grains. Capacity is 8,000 grains. (3) Mettler's standard line of analytical and multi-purpose balances and precision scales.
Robert Moeller, John O'Connor, Neal Cooper, David L. Jones.

Fr. Mettler's Sons Ltd. 821
Switzerland
(See Cosa Corp.)

Mezzera, S.P.A. 1412
Italy
(Represented by Ernest L. Frankl Associates)
(1) Mezzera automatic skein dyeing



JAPANESE AUTO-DOFFER — Edward S. Rudnick, New Bedford, Mass., will feature this Japanese Auto-Doffer in its exhibit at Booth 931. The unit is designed to automatically doff a 400-spindle frame in less than two minutes. It's a product of Kanegafuchi Machine Co. in Japan.

machine with four arms, completely enclosed. (2) Illustrations, descriptions and catalogs of Mezzera dye jigs, rope washing machine, etc.

Mill Devices Co. 39
Gastonia, N. C.
(Represented by A. B. Carter Inc.)
Accessory equipment, winding, spinning, weaving.

Milton Machine Works Inc. 386
Milton, Pa.
(1) Warp beams for broad, narrow fabric, ribbon, velvet and carpet looms. (2) Salvage spools and special beams made of aluminum.
J. Stanley Billig, John B. McMurtrie, Charles J. Anchor, H. I. Shultz.

Minneapolis-Honeywell 286
Regulator Co., Industrial Division
Philadelphia, Pa.

(1) The Moist-O-Graph IV system, an automatic system for recording and controlling the amount of moisture in fabric during processing. The unit can now be set up with any Electronik recorder and any of the standard Honeywell forms of control as part of the system. (2) A low range Radiamatic radiation pyrometer which measures surface temperature of fabric moving in process. The sensing element measures the temperature without touching the fabric by converting the radiant energy emitted into a measurable emf. It is designed for temperatures between 125 and 700° F. (3) Elektrik Tel-O-Set control system. (4) Pneumatic Tel-O-Set control system. (5) Versa-Tran electronic liquid level controller. (6) ADRT 3020 data handling system. (7) A new Electr-O-Volt controller. (8) Control valves.

Robert D. Clarke, William Munz, Ralph Fishburn.

LENGTHEN - SPREAD - RECONDITION

Flyers converted to fit your present needs. The "Price" way cuts costs on conversions by lengthening and spreading Flyers to produce larger packages. Let the "Price" way be your way to save money on all your Flyer and Presser problems.

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PRICE SPINDLE & FLYER COMPANY, INC.

Phone 8829

Box 401

Spartanburg, S. C.

Mitsubishi International Corp. 1034

New York City

(Representing Hiroshima Machine Works, Howa Machinery, Mitsubishi Nippon)

(1) F. M. Drawing frame, Type EM, said to feature: Fleece-mixing blending method; two-head, one delivery; Ban-tube coiler mechanism; independent drafting gear and separate drafting assembly; highest delivery speed; oilless running; automatic sliver cutting; large can available; and electric stop motion and 2-speed driving. (2) Air Pot type spinning frame for worsted yarns, Type 10 ASF-3, said to offer spinning speeds much faster than a ring spinning frame. The usual speed of the frame is said to be from 16,000 to 18,000 r.p.m. End-breakage is said to be practically eliminated since tension is greatly reduced.

S. Yamashita, Edwin Leonoro, T. Nagona, Shozo Noda, Tutomu Ito, Terukazu Kuga, Akira Kato.

Mitsubishi Nippon 1034

Heavy Industry

Osaka, Japan

(See Mitsubishi International Corp.)

Mitsui & Co. 1148

New York City

(See Edward S. Rudnick).

Modern Textiles Magazine 306

New York City

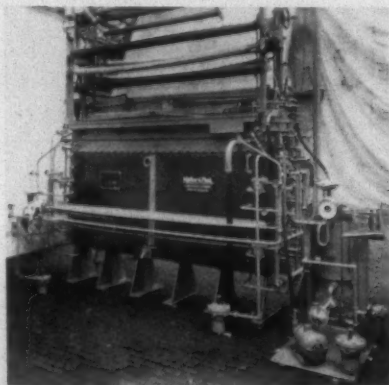
Textile publication.

Morrison Machine Co. 508

Paterson, N. J.

(1) Hydraulic calender—40-ton, 60" face, 3-roll. (2) Dye padder—airset, 15-ton, 3-roll, 70" face. (3) Standard finishing tenter. (4) Serpentine washer—5-compartment, 60" face.

John C. Morrison, John Kreeft, A. V. Caporossi, A. C. Freeman.



ENGLISH DYEING UNIT—Standfast Dyers & Printers Ltd. of England will display one of its patent continuous molten metal dyeing units. Speeds on the unit range from 50 y.p.m. for pigment padded and wet developed fabrics to 120 y.p.m. for leuco dyed fabrics.

Mount Hope Machinery Co. 426

Taunton, Mass.

(1) The Mount Hope Skew-Liner featuring automatic operation. (2) The automatic tension control for use wherever winding, unwinding, conveying or similar operations are being carried out. (3) Other equipment including free-wheeling expanders, floating roll guides, precision guiders, slack selvage eliminators, selvage uncurlers, web controllers, cloth opening equipment and cloth handling devices.

Also displaying with Mount Hope is Heinz Mahlo which is showing: (1) Moisture indicating controlling set Textometer Model RMS-IV. (2) The Orthomat which indicates the lie of the weft threads in a running length of cloth and automatically brings weft straightening apparatus and equalizing stenters into operation. (3) Type DMB battery operated moisture meter.

J. D. Robertson, John Robertson Jr., William Gallahue, Sam Moffitt, Home Kapadia, Heinz Mahlo, Gunther Schellenberger.

Jakob Mueller 1325

Switzerland

(Represented by Ernest L. Frankl Associates)

Samples of fabrics woven on the company's narrow fabric looms plus catalogs and illustrations of the units.

Jakob Mueller.

Franz Mueller 1037

Maschinenfabrik

(Represented by Parrott & Ballentine Textile Equipment Co.)

(1) A 6-roller Tri-Napper, a high-speed raising machine with a speed up to 50 y. p. m. The unit shown is a double-action napper for woven fabrics. (2) The Bitroma winder, a winding machine with variable speeds ranging from 255 to 1,600 y.p.m. It is used mainly in winding dye packages.

Karl August Muellers, August Hovcrath, Perry M. Parrott, Joe Ballentine, Sam Hufstetler, Allan Schnitzer, Herb Akerblom.

The National Drying 74

Machinery Co.

Philadelphia, Pa.

Construction details of the company's structural members, insulated panels, seal-type doors, air control devices, air turning vanes and the adjustable pitch circulating fan.

Ralph C. Parkes, David A. Colker, George J. Schillinger Jr., John J. Nihill, Harold E. Swanson, John Hayes, Lawson Hayes.

National Ring Traveler 89

Pawtucket, R. I.

Representative examples of the many styles and sizes of ring travelers produced by the company.

Frederic L. Chase Jr., Norman Jerome, James T. Greenlaw, L. E. Tay-

A.T.M.E.

lor, H. B. Askew, T. Hill Ballard, Frank S. Beacham, Charles Fitts.

National Starch & 713

Chemical Corp.

New York City

Displaying two new products specially formulated for finishing, hand building or pigment binding under the new cross-linking concept. The new products are designated Resins 78-3143 and 78-3147. They are recommended for use with wash-and-wear, non-woven, dress goods and industrial fabrics.

J. F. Fitzgerald, H. Olsen, J. Du-charme, H. Smith, E. Maslanka, D. Lassiter, E. Gibbon, G. Lanciault, S. Raudelunas.

National Vulcanized 1231

Fibre Co.

Wilmington, Del.

(1) Kennett roving cans, mill boxes, Utili-trays, knitwear hampers. (2) Kennett, Hercules and Unilevel trucks. (3) Kennett waste receptacles. (4) Vlu-Cot waste baskets. (5) Lester-sire spools and bobbins.

New Departure Division, 127

General Motors Corp.

Bristol, Conn.

A comprehensive assortment of various ball bearings as applied to textile applications.

J. J. Creamer, W. S. Shepherd, R. E. Honeycutt, R. D. Brouwer, E. H. Case, T. H. Adams Jr., C. T. Bragdon, A. C. Lormore.



HIGH TEMPERATURE CONVERTER—A. E. Staley Mfg. Co., Decatur, Ill., will exhibit its high temperature converter, a new system for preparing warp sizes from unmodified corn starch. The converter is designed to deliver a highly uniform warp size with precision control of solids concentration, viscosity and degree of conversion.

A.T.M.E.

Louis Newmark Ltd. 1336
England
(Represented by Stellamcor Inc.)

(1) Manra warp tension balance. (2) Manra Vibrascope for the accurate determination of the denier of any fiber sample of a length greater than 3 cms. (3) Manra Electronic Unit No. 1, a bridge amplifier designed to convert the information supplied by a suitable capacity type transducer into a form suitable for displaying on a pen recorder or oscilloscope. (4) Manra Strainometer for the detection and measurement of many yarn faults by the continuous measurement of the elastic properties of continuous filament yarns. Units are available for yarns from 15 to 5,000 denier. (5) Manra Yarn Tension transducer designed to measure yarn tension continuously and particularly transient and peak tensions which mechanical tensiometers cannot detect. (6) Manra yarn filament counter designed to count rapidly and automatically the number of filaments in a continuous filament yarn. (7) The W.I.R.A. fiber diagram machine designed to test fiber length in samples of tops.

Nippon Card Clothing Co. 1148
Osaka, Japan
(See Edward S. Rudnick)

Nippon Spindle Mfg. Co. Ltd. 1148
Osaka, Japan
(See Edward S. Rudnick)

John P. Nissen Jr. Co. 759
Glenside, Pa.
Writing tubes with dye resist and bleachproof inks for marking textiles for permanent identification through all finishing operations.
Chandler Ford, M. A. High III.

Norcross Corp. 469
Newton, Mass.
(1) A complete line of viscometers for process control applications in the textile industry. (2) The Norcross Sizerometer—a complete automatic system for preparing sizing in one-third the normal cooking time.
Austin S. Norcross, Robert A. Norcross, Robert S. Davis Jr.

North American Mfg. Co. 1402
Cleveland, Ohio
(D.N.A.)*

North Carolina State College 1100
School of Textiles
Raleigh, N. C.
An exhibit showing the benefits of textile education and aspects of the school's textile research center.
M. E. Campbell, E. B. Grover, W.

A. Newell, D. S. Hamby, G. H. Dunlap, C. M. Asbill.

O-M Spinning Machine 1148
Mfg. Co. Ltd.
Osaka, Japan
(See Edward S. Rudnick).

Panamerican Publishing Co. 428
New York City
Spanish language textile publication.

Paramount Textile 1145
Machinery Co.
Chicago, Ill
Paramount vacuum steam conditioner.

Edward Parkinson Mfg. Co. 609
Esmond, R. I.
(D.N.A.)*

Parks & Woolson Machine Co., 270
Division of Riggs & Lombard, Inc.
Lowell, Mass.
(See Riggs & Lombard Inc.)

Parks-Cramer Co. 564
Fitchburg, Mass.
The company will display its complete line of traveling cleaner equipment, both blowing and vacuum, its Spin-Sa-Vac end collection and Spin-Sa-Creel systems, and the Parks-Cramer Certified Climate systems for humidification and cooling.
M. Ford, C. E. Lee, J. Nesmith, L. R. Sibley, W. B. Granger, J. C. Kelly, W. B. Walker, W. J. Buck, E. F. Kulp, C. E. Ware, W. W. Hewett, A. C. Buck, D. S. Gilchrest, G. F. Kellogg, E. H. Harding.

Parrott & Ballentine 1037
Textile Equipment Co.
Greenville, S. C.
(Representing Franz Mueller)
Winding and napping equipment.

Patterson-Kelley Co. Inc. 1501
East Stroudsburg, Pa.
(D.N.A.)*

Penick & Ford Ltd. 682
New York City
Starches and starch derivatives from

corn as applied to warp sizing and finishing of textiles.

O. H. Tousey, D. P. O'Connor, P. G. Wear, G. M. Anderson, J. R. Heard, J. P. Holland, G. C. Henry, W. J. Kirby, T. H. Nelson, D. K. Smith.

B. F. Perkins & Son Inc. 163
Holyoke, Mass.

(1) Two-roll hydraulic Schreiner calender. (2) Let-off which is dial-set to the desired tension. (3) Wind-up. (4) Hydraulic unit for delivering pressures to 7,500 p.s.i. (5) Mullen testers for burst testing, water penetration tests and crushing resistance tests. (6) Batch counter. (7) Seam detector. (8) Shrink and stretch meter.
J. L. Perkins Jr., B. F. Perkins, Marion P. Duryea, B. P. Astley, E. B. Norman, Kurt Zimmerli, C. J. Stevens, Harold Ball, W. Greenwood.

Metiers Automatiques 952
Picanol, S. A.
Belgium
(D.N.A.)*

Platt Bros. Ltd. 818
Great Britain
(Represented by Atkinson, Haserick & Co.)

(1) Cotton card equipped with Crosrol web purifier and Universal coiler. (2) MDF.5 high-speed draw frame with recommended speeds of from 300 to 420 f.p.m. The machine is 18" gauge. Various drafting systems are available, based on three lines of bottom rollers. Spring loaded, over-arm weighting to top rollers is standard. (3) The Hartford 8 comber is an 8-head unit designed to quality comb at up to 60 pounds per hour. Laps of 20 to 40 dwt. may be processed and slivers of 40 to 60 grains per yard produced with either bi-coiling or twin can coiling. It is designed to operate with equal efficiency at waste extractions from 5 to 25%. (4) MS.3 speed frame is a slubber producing 14x7" bobbins containing up to 100 ozs. of roving with high tension winding. Increased spindle speeds up to 1,200 r.p.m. for this size package are claimed. (5) MR.4 narrow ring frame, an all-count, general purpose, high-efficiency machine. (6) The Platt tape condenser is designed for every class of work from heavy carpet and rug wools to the finest Saxonomies.

S. C. Seward, B. A. P. Dobson, Roy Whittaker, Irvin Marsden.

Plutte Koecke & Co. 948
West Germany
(Represented by Atkinson, Haserick & Co.)

Pneumafil Corp. 761
Charlotte, N. C.
(1) Pneumafil vacuum end collectors—The latest C-12 units for superior suction cleaning of spinning frames

OFFICIAL REGISTRAR

Textile Bulletin again this year will be pleased to act as Official Registrar at the American Textile Machinery Exhibition — International. If we can be of service to you, please don't hesitate to call on us.

and collection of broken ends. (2) Pneumastop roving frame stop motion. (3) Electrofil—stops the roving frame instantly when a creel break occurs, leaving a tail for piecing up.

C. R. Harris, J. W. Barr, M. E. Herndon, G. E. Archer, W. W. Lloyd, D. J. Thorp, G. C. Fryer.

The Portland Co. 89A
Portland, Me.
The Chapman Statomatic static eliminator.

Presin Co. 65
Santa Monica, Calif.
(1) Model LS 40 WF weft feeler—a single lens reflex optical switch capable of detecting by reflection threads of less than 1-denier. (2) Model U 2880 automatic cycling predetermining counter. (3) A new optical bobbin feeler.

Proctor & Schwartz Inc. 579
Philadelphia, Pa.
(1) The Proctor paddler, available in both 2 and 3-roll models, is used for finishing, impregnating and dyeing fabrics of all weaves and of all fibers. Manual setting of the squeeze rolls to the most effective relative position for any padding operation is possible. (2)

The float dryer will be shown as a finishing pre-dryer but has been used as an intermediate dryer after bleaching, dyeing and printing, and as a special dryer for velvets, plushes and heavily coated fabrics. (3) The universal tenter is designed to dry, cure or heat-set all fabrics of natural or synthetic fibers and natural-synthetic blends. A new feature is the new pin, clip or combination pin-clip tenter chain which is said to handle and guide fabrics at high speed with gentle care. (4) The rotary polymerizer uses a combination of conduction and convection heating and a reel-like arrangement for cloth travel and retention of from 40 to 880 yards. (5) The Proctor-Form is designed for the continuous production of nonwoven fabrics. It is said to produce quality webs from natural and synthetic fibers at capacities up to 1,200 lb./hr. in widths from 60 to 96". It will process fibers up to 6" in length without shortening or damaging the fibers. (6) The controlling weight belt is a standard unit with a constant speed, chemically inert, light weight conveyor which continuously and automatically weighs material passing over it. The unit is designed to weigh any low density, relatively light weight material to an accuracy of plus or minus 1%. (7) The Proctor fiber blending feed is designed to automatically weigh and

A.T.M.E.

proportion various baled stocks into a process.

W. W. Sibson Jr., J. P. Wilson, John Dalglish, Meier Windhorst, C. W. Schwartz, A. G. Blank, T. H. Wentz, E. W. Behrning, W. A. Dickinson Jr., R. E. Fink, L. M. Christianson, R. L. Hendricks, D. D. Cunningham, J. P. Christ.

Qualitex 1316
Holland

The Qualitester is an electronic yarn tester designed to give precise information regarding the number and kinds of spinning faults in a yarn. It consists of: (1) a six-spindle variable speed winding machine; (2) a capacitance detector and cutting mechanism for each spindle; (3) two control panels; and (4) a recorder for the output voltage of the measuring amplifier.

Ateliers Raxhon S. A. 851
Belgium

Displaying a shearing machine designed to allow maximum precision in shearing.

Jean Valencon, Paul Boterdaele.

Faster Starting Higher Speeds... Longer Service

Over 2,000,000 Lubri-Cased Spinning Rings* have proven Kluttz' claims of faster break-ins and continuous faster running, with a wear factor of over 25% better than rings which have not been Lubri-Cased.

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Kluttz Rings are guaranteed to satisfy.

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Representatives: Thomas H. Watson, Maiden, N. C.
Hugh K. Smith, West Point, Ga.

KLUTTZ RINGS, INC.

Gastonia, N. C.

The Kluttz
Lubri-Cased*
Spinning Ring

*Trade Name Patented



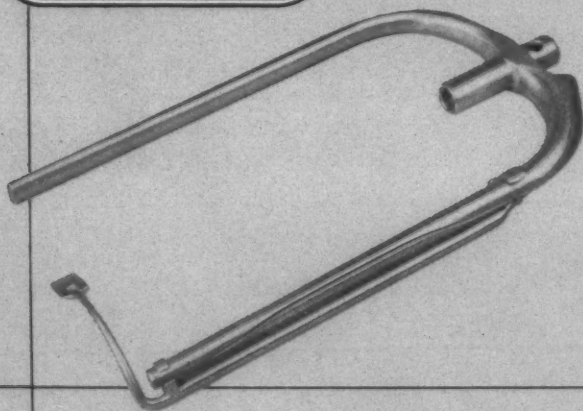
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Ny-Pre-Lon Cradles for
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- Paper Spinning Tubes & Quills Textube Corporation
- SKF Roller Bearing Spindles Zinser
- Maier Prima Flyers Eugen Maier
- Spinning & Twister Rings Reiners & Fuerst
- Wood Spools & Bobbins & Cones Vermont Spool & Bobbin Co.
- Fibre Head Spools & Bobbins H&P Spool Bobbin Co.
- Plastic Quills & Bobbins Vulcanized Rubber & Plastic Co.
- Shuttle Fur R. M. Taylor Co.
- Humidifiers Walton Laboratories, Inc.
- Dye Tubes & Headless New England Paper Tube Co.
Shipping Packages
- Dubo Spindle Lock Washers G. Dikkers
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MAIER-FLÜGEL

Maier Prima Flyers...

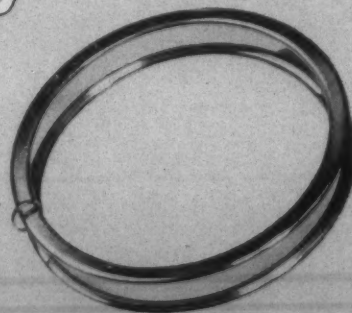


The heavy shoulder construction of Maier Prima Flyers allows maximum extension in width and height. High polish, especially in throat and hollow leg prevents "eyebrowing" and insures high quality roving. Notched throat puts false twist into roving. Drop presser is designed for gently-angled roving (as it leaves hollow leg) to prevent breaking away of fibers ... dynamically balanced at maximum speed within ± 1.1 gram tolerance. RHCM, chrome-matte finish. Location of slot in eye of presser finger makes threading almost automatic.



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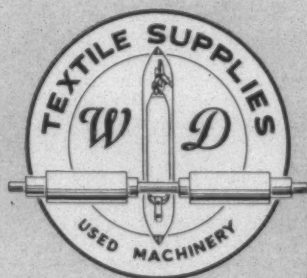
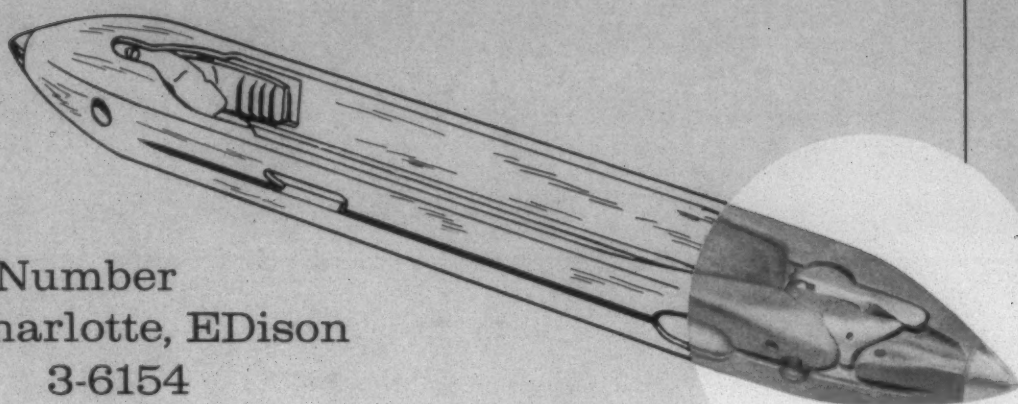
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EDison 3-6154	UNiversity 5-8631	Box 701	Phone 64-23363
		BRoadway 3-3012	

IN GREENVILLE, S. C.:
Ray A. Norman
Box 779
CEDar 9-4279



High Speed Twister Spindles...

Because of the higher speeds and larger packages possible with Zinser Spindles mills have increased production as much as 20%. More than 40 million Zinser Spindles are in operation all over the world. Long life, easy maintenance, simple to lubricate, and smooth running at high speeds. Sized for bobbin weights from 1-3/4 ounces up to 12 pounds; for speeds up to 18,000 RPM.

Watson & Desmond

P. O. BOX 1954 • CHARLOTTE, NORTH CAROLINA

COME SEE US IN ATLANTIC CITY...
BOOTHS 672-5

A.T.M.E.

Robert C. Reed Co. 277
Harrison, N. J.

Shoddy pickers, waste machines, opening machinery, beaters and pinned lagging.

W. E. Macpherson, L. Bock.

Regent Machinery Corp. 1533
New York City
(D.N.A.)*

Robert Reiner Inc. 1331
Weehawken, N. J.
(Representing Famatex, Conorapid, and Schaffhausen Knitting Machine Works Ltd.)

(1) The Famatex single layer tenter is designed for the tenting, drying and heat-setting of any woven or warp-knit fabric of natural and synthetic fibers. (2) The Conorapid precision cross-winder offers an operating speed of 2,000-4,000 r.p.m. (3) The Schaffhausen rubber thread covering machine is said to have lower spindle range from 8,000 to 16,000 r.p.m. and upper spindle range from 4,000 to 16,000 r.p.m. The main motor alters spindle speed steplessly for lower spindles—and a speed variator for upper spindles.

H. D. Scheube, H. C. Feustel, J. A. Vollman, W. Horn, A. Schaufelberger, K. T. Marx.

Republic Steel Corp. 676
Cleveland, Ohio
(D.N.A.)*

Rhodia Inc. 35
New York, N. Y.
Rhovyl fibers and filaments including: Rhovyl 55, Rhovyl 30, Rhovyl 15 and Rhovyl T. Properties claimed for the fibers include: non-flamability—they will not emit flaming droplets under any circumstance; resistance to chemical abrasion; thermoplastic qualities—these make the fibers especially applicable to nonwoven uses; resiliency—the fibers are said to be used to a great extent in wadding for quilting material. In addition to these qualities, Rhovyl 55 is a high shrink fiber used largely in the manufacturing of carpets. Rhovyl T is a non-shrink fiber.
Louis Hochstaedter, Richard Netland.

Rieter & Co. Ltd. 5
Switzerland
(See American Rieter Co.)

Riggs & Lombard 270
Lowell, Mass.
(1) Vibrator to process all types of fabrics. (2) Cotton shear—new high speed model. (3) Shear for pile fab-

rics. (4) Fulling mill with heat control. (5) Automatic storage scray for straight line processing. (6) Compactor to remove relaxation shrinkage in fabrics and to provide surface effects.

Ateliers de Constructions 1054
Textiles Roannais
France
Twisting machines, stretch yarn machines.

Roberts Co. 344
Sanford, N. C.
Three Arrow spinning frames will be in operation. The Arrow M-1 will be running various cotton and synthetic yarns to illustrate high speed and the frame's versatility for a wide variety of cotton system assignments. The Arrow WM-1 narrow worsted frame incorporates a new version of the Perma-Set drafting system which can be run either as a 4-roll full control system or as a 3-roll adjustable system. An improved suction cleaning arrangement will also be exhibited. Model WM-2, a 36" worsted system machine, is said to be especially suitable for coarser knitting yarns from a broad variety of synthetic fibers and wool.

Roberts-Tematex ParaDrafters are designed to pin, parallelize and draft worsteds and long fiber synthetics in operations which precede spinning. The AutoEvener combines a single-head, single-delivery ParaDrafter with an electronic mechanical control unit to correct sliver entering within a weight variation of plus or minus 20% into a delivered sliver with a maximum variation of plus or minus 1%.

Robert E. Pomeranz, Jonathan N. Pomeranz, Ralph Padgett, Germinal N. Giraudi, D. E. Reynaud, Meigs C. Golden, Alejandro Bautista, Carl E. Oliver, William A. J. Peacock, R. Frank Walker, Selwyn Kent, Meade O. Bradshaw, Ed Blackwood, Jack Stanley, Fred Glass, William Rankin.

Edward B. Rock 808
Brooklyn, N. Y.
(Representing Cometsa)

Mac M. Rothkopf & Co. 1401
Brooklyn, N. Y.
(Representing Lebocey Needle Co.)
Accessory equipment for knitting machines. (D.N.A.)*

Rothschilde Messinstruments 18A
Switzerland
(Represented by Fabronics Corp.)

B. S. Roy & Son Co. 408
Worcester, Mass.
(Representing Peter Wolters)
Card clothing, traverse card grinders, Peter Wolters centerless cot grinder, Peter Wolters cot tester, in-place portable roll grinder, Nocker card flat

irons, AlumaRoy drum, Microsision cradle.

D. Bousquet, F. Buonomo, D. Dewar, F. Leppkes, H. Vovensiepen.

Royal Worcester 1217
Industrial Ceramics Ltd.
Great Britain
Ceramic thread guides.

Rudel Machinery Co. Ltd. 378
Montreal, Canada
(See Marshall & Williams)
Finishing equipment. (D.N.A.)*

Edward S. Rudnick 1148
New Bedford, Mass.
(Representing Daiwa Spinning Co., Kanegafuchi Machine Co., Mitsui & Co., O-M Spinning Machine Mfg. Co. and Nippon Spindle Mfg. Co., Izumi Bobbin Co., Nippon Card Clothing Co., Toscin Kogyo Co.)

(1) The Auto-Doffer for the completely automatic doffing of spinning or twisting frames. (2) OM-S sliver-to-yarn spinning frame with new automatic spindle speed regulations. (3) O-M high-speed drawing frame with automatic can changing. (4) Ever-Even automatic feedback control and continuous evenness plotting on drawing frame. (5) Daiwa's improved carding device operating on cotton card at 20 pounds per hour. (6) Miscellaneous items including: spindle cleaner and lubricator, spindles, top rollers, suction clearers, portable roll picker, bobbins, tubes and shuttles, and card clothing.

Edward S. Rudnick, William Bowlin, Jose M. Urrutia, I. Uchibe, R. Furuyama, A. Aoki, T. Hiki, T. Fujiwara, N. Tagashira.

Ruti Machinery Works Ltd. 1319
Switzerland
(Represented by H. J. Theiler)

(1) Automatic 1x1 box container loom for a wide range of fine and coarse filling, Model BANLXK-M. (2) A 4x1 automatic container loom particularly suited for fancy and check fabrics, Model BANGTW/4-MM. (3) An automatic high-speed loom with Unifil winder, Model BANLX-U. (4) A 4x1 automatic bobbin changed designed for silk and rayon fabrics, Model SINZAW/4.

A. H. Deucher, B. Bolsterli, B. Kaspar.

SKF Industries Inc. 29A
Philadelphia, Pa.

Exhibiting: HF Series roller bearing bolsters for high-speed spinning; HZ Series roller bearing bolsters for high-speed heavy package twisting; Draft-rite roller bearing top rolls; PK-300, 400 and 500 pendulum weighting arms for high quality drafting; anti-friction tension pulleys; HM Series roller bearing bolsters; FR-23241 belt guide rollers; FD-630 false twist spindles;

RH-1816 draw frame top rolls; general bearings.

B. K. Lathbury, R. E. Kinney Jr., B. F. Davis, D. C. Black, J. O. Cushing, A. B. Studley, J. T. Paradise, I. Schmid.

Industrie Saccardo 663
Italy
(See Lenkotex Co. Inc.)

Saco-Lowell Shops 482
Boston, Mass.
(Also representing Allgauer Maschinenbau).

(1) A new roving frame will be introduced, reportedly operating at speeds never before attained on a roving frame. It is also said to give the largest package with smoother, more efficient operation. (2) The Versa-Matic ADC draw frame which is designed to automatically control drafting to compensate for variations in sliver weight. (3) The Versa-Matic draw frame with pneumatic air suction clearers. (4) The new SJ worsted spinning frame is a Gwaltney type frame featuring a double apron drafting assembly designed to take advantage of the frame's high speeds. The drafting assembly incorporates special fiber control features which give it wide versatility in drafting worsteds, staple synthetics and blends. (5) The SF-4C worsted drafting changeover is an improved drafting element adaptable to conventional frames. (6) SJ MagnaDraft spinning frame uses constant magnetic forces to assure constant maintenance of yarn quality. (7) Fleissner air-suction type of drum dryers used for drying all types of raw stock and loose fibers, including top, tow, skeins, nonwoven fabrics and knitted goods. (8) The Saco-Lowell/Davidson-Kennedy opener-blender-cleaner, based on the design of the S.R.R.L. opener. It features totally enclosed construction. (9) The Saco-Lowell/Allma twister — both heavy and light models to be shown.

Saentis Inc. 1140
Union City, N. J.
(Representing Adolph Saurer)

Georg Sahn Maschinenfabrik 833
West Germany
(Represented by Cosa Corp.)
Winding machines. (D.N.A.)*

Sample Weaving Machine Co. 910
Switzerland
A sample weaving loom with electromagnetically operated shafts.
Peter J. Werner.

Sant' Andrea Novara, S.P.A. 1223
Italy
(Represented by Ernest L. Frankl Associates).
(1) New rectilinear comb, Model PS,

18" combing width demonstrating combing wool at 160 n.p.m. (2) Rectilinear comb combing synthetic fibers at 175 n.p.m. (3) High speed intersecting gill box, Model SD/n with automatic evenness regulator. (4) New high speed roving frame with special draft roller drafting systems and bobbin delivery through rub apron false twist motion, running at a front roll speed of 55 y.p.m.

Giovanni Masera, Giovanni Bettolo, Carlo Schleifer, Pietro Savoini.

C. G. Sargent's Sons Corp. 470
Graniteville, Mass.

(1) New design, gas-fired, single-pass stock dryer for drying all fibers and staple. (2) A synthetic staple opener and blender for either wet or dry staple.

F. Stanley Smith, Richard W. Hall, J. R. Angel, Bryce H. Crocker, Hugh Williams, D. H. Caldwell, Ernest Carlin.

Adolph Saurer Ltd. 1140
Switzerland

(Represented by Saentis Inc.)

(1) Automatic 6x1 drop box loom Type 100—a fully automatic loom for the production of multi-color fabrics with 5 or 6 colors in the weft. (2) A single-shuttle automatic magazine-reloading loom Type 100W, with self-acting reloading device. (3) A single-shuttle automatic loom Type 100W with Unifil loom winder. (4) Single-shuttle automatic terry towel loom Type 100W with electro-magnetic name weaving apparatus system Huttwil.

A.T.M.E.

Schaffhausen Knitting 1339
Machine Works
(See Robert Reiner Inc.)

Scharer Textile Machine Works 935
Switzerland
(Represented by Yeoman's Textile Machinery Co.)

(1) Automatic bobbin winder with pin-board stacking device for filament yarns. (2) Automatic bobbin winder for cotton yarns. (3) Automatic bobbin winder for wool yarns. (4) Scharer pineapple cone winders.

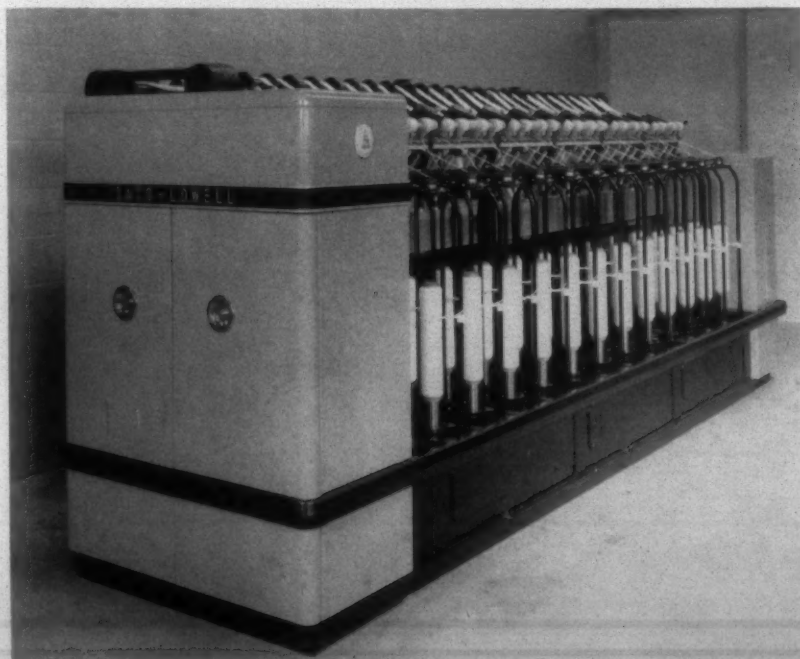
Jacques Scharer, Charles L. Yeomans, Charles H. Turner, Max Jent, Otto Zollinger, Kaspar Laager.

Benno Schilde 827
Maschinenbaum Ag.
West Germany
(See Cosa Corp.)

W. Schlafhorst & Co. 304
West Germany
(See The Terrell Machine Co.)

N. Schlumberger & Cie. 1423
France

(1) Model PB 25 L comber—This unit is normally fed from six double-end cans (24x47½") but can also be fed from bobbins. It has a working width of 16-9/16". Normal speed is 125 strokes/min. (2) A finisher intersecting gillbox equipped with draft regu-



NEW SACO-LOWELL ROVEMATIC ROVING FRAME—A highlight of the Saco-Lowell exhibit at Atlantic City will be this new RoveMatic roving frame, Model FB. Under development since 1956, the new unit is described by Saco-Lowell as "the roving frame of tomorrow."

A.T.M.E.

lator. It has a faller speed of 1,000 to 1,200 strokes/min. Draft is 6 to 12, according to the material being processed. Delivery speed is 65 to 110 y.p.m.

Turpin Andre.

Schmidt Mfg. Co. 647
New Bedford, Mass.

(1) Duraflex and Rubberset loom reeds. (2) Polydur pickers, lug straps, sweepsticks, gears, let-off bands. (3) Grob light metal harness frames, flat steel, leno and twin wire heddles. (4) Micro-Shave temples designed to eliminate shearing. (5) Patent bar temples that run the entire width of the cloth. (6) Ring temples with nylon bushed rings. (7) K-15 silicone warp spray. (8) Shirley line gratings and testing instruments. (9) Compreg-Beech shuttles and bobbins.

Clayton Schmidt, Ralph F. Schmidt, Joseph C. Motta, Ted Huston, O. C. Walker, Max Diggelmann, Karl Brenna, Colin Bulcock, Eric Runge.

A. G. Scholl 837
Switzerland
(See Cosa Corp.)

Herman Schwabe Inc. 710
Brooklyn, N. Y.

Schweiter Ltd. 1040
Switzerland
(Represented by H. J. Theiler)
(1) Automatic pirn winders for cotton, wool, synthetics, etc. The winders feature automatic feeding device for empty pirns; dust removing device; rotor device to cover the tail end at the heads of the pirns; bunch at the tip of the pirn; parallel pirn arrangement suitable for all kinds of materials. (2) Automatic pirn winders with individual multi-cell magazine for fully synthetic yarns, with pirn depositing device. (3) Automatic hollow cop winders for winding hollow cops of wool, jute and linen. (4) Automatic supercop winders for the production of supercops on initial cones, for cotton, wool and linen. (5) Vario-Coner

cone winders for wool and cotton. (6) Vario-Coner with yarn delivery arrangement to unroll dyed hanks of fully synthetic stretch yarn. (7) Mono-fil-Coner for the production of pineapple cones, to unwind from twisting bobbins and for handling fully synthetic yarns. (8) Monofil-Coner with yarn delivery arrangement, to unroll from dyed hanks of fully synthetic stretch yarn.

W. Gutzwiller, B. Neri, F. Bolliger.

Scott Testers Inc. 553
Providence, R. I.

(1) The CRE constant-rate-of-extension tester incorporating electronic weighing and upward moving cross-heads—plus pushbutton controls. Test capacities range to 1,000 lbs. (2) The Scotamatic tester designed to permit fully automatic and unattended testing and recording of tensile strength of yarns.

Ernest Scragg & Sons Ltd. 1425
Great Britain

(Represented by International Sales Management)
Introducing to the American industry a new textured yarn process for the production of stabilized high-bulk polyester and polyamide modified filament yarns. The new process is said to make filament yarns usable with complete success in knitted outerwear. Yarns produced by the process are said to possess non-torque physical properties combined with a covering capacity up to 50% greater than wool.

Seydel-Woolley & Co. 57
Atlanta, Ga.

(1) The Niagara twist setter which serves the purpose of treating bobbins of yarn with a Seyco twist setting solution, which fixes the twist in the yarn, thereby eliminating difficulties from filling kinks during weaving. (2) The Seyco warp lubricator is designed to apply lubricating oils or waxes to the warp yarn sheet between the drying section of the slasher and the leasing section. (3) Various types of textile chemicals including: warp sizing compounds, softeners, detergents, dye assistants, Sanforizing aids, mercerizing assistants, wash-and-wear resins, etc.

Vasser Woolley, Paul Seydel, Welling LaGrone, John Seydel.

Sharples Corp. 9
The Fletcher Division
Philadelphia, Pa.

A high-capacity, 48" diameter, all-stainless steel Whirlwind extractor.

The Sheffield Corp. 384
Dayton, Ohio

A new Neptel yarn imperfection counter and three new Micronaire instruments will be displayed. The

Neptel counter automatically counts imperfections at a rate of 50 yards in 30 seconds.

Among the Micronaires is a new pocket-size model designed to enable cotton buyers and sellers, processors and others to determine fineness on the spot. The unit has a scale for weighing the cotton sample, a means for mechanically generating the air supply, and a Micronaire scale and indicating column.

A portable laboratory Micronaire with Constantaire regulator to control the air flow precisely—eliminating the necessity for a manometer—will be shown. Another model designed to eliminate wear on the plunger and cylinder and to speed inspection is included. It features single-hand lever control of gaging and unloading operations and Constantaire regulator control.

The Simco Co. 610
Lansdale, Pa.

(1) Static eliminators for all types of textile machinery. (2) The Simco electrostatic locator for analyzing static problems. It is equipped with a calibration chart so that not only can electrostatic charge be located and its polarity determined, but voltage on the material can be determined. (3) Moisture indicator. (4) Neutro-Stat, anti-static material available in an aerosol can for application to machinery belts, boards, etc. The material is also available in bulk for application to static susceptible material by padding or dipping.

Dolph Simons, Warren W. Levy, Harold A. Schweriner, William Rowedder.

Sjostrom Machine Co. 659
Boca Raton, Fla.

Accessory machines for preparatory and finishing departments. (D.N.A.)*

James Smith & Son Inc. 350
Worcester, Mass.
(See R. H. Hood Co.)

Snedeker & Co. Inc. 1000
Ansonia, Conn.

(Representing Texnovo S.P.A.)
(1) Texnovo Ultratex 16/25 shuttleless loom with 16-needle weaving units producing cotton zipper tape up to 1" at 800 r.p.m. (2) An Ultratex loom with special device allowing the production of an elastic underwear webbing up to 1½" at 800 r.p.m. (3) A TX 5/160 shuttleless loom with 5-bobbin weaving units producing elastic corset webbing of 6" at 220 r.p.m.
Giovanni Piazzolla, August J. Groh, Carlo Villa.

Soabar Co. 10
Philadelphia, Pa.
Materials handling. (D.N.A.)*

OFFICIAL REGISTRAR

Textile Bulletin again this year will be pleased to act as Official Registrar at the American Textile Machinery Exhibition — International. If we can be of service to you, please don't hesitate to call on us.

Sobelcard, S.P.R.L. 850
Belgium
Accessory equipment for preparatory machines. (D.N.A.)*

Sonoco Products Co. 82
Hartsville, S. C.
Paper cones, tubes, spools, cores, bobbins and specialties.
C. H. Campbell, C. W. White, J. K. Taylor, L. H. Stokes, A. H. Gildersleeve, J. A. Durkin, W. K. Lewis Jr., J. A. Regan Jr.

Southeastern Loom & Machine Works 1229
Greenwood, S. C.
(See Abney Mills)

Southern Regional Research Laboratories, Agricultural Research Services, U.S.D.A. 755
New Orleans, La.
Preparatory machines. (D.N.A.)*

Southern Textile News 701
Charlotte, N. C.
A textile publication.

Spaulding Fibre Co. Inc. 397
Dover, N. H.
Materials handling products. (D.N.A.)*

Morris Speizman Co. Inc. 1535
Charlotte, N. C.
(See Interstate Textile Equipment Co.)

Spencer & Halstead Ltd. 1047
Great Britain
(Represented by Atkinson, Hasserick & Co.)
(1) Vortex oiling device. (2) Oily wool conveyor fan unit. (3) Rotary spreader. (4) Mock-up Fearnought machine.
A. Wilbur Hayden, Douglas D. MacDonald, Eugene Bramhall.

Spintex Spinnerei-Maschinenbau 663
West Germany
(See Lenkotex Co. Inc.)

A. E. Staley Mfg. Co. 165
Decatur, Ill.
The Staley high temperature converter, a new system for preparing warp sizes from unmodified corn starch. The system goes beyond starch cooking to achieve conversion of the starch paste to a non-congealing product of reduced viscosity. The unit starts and stops itself automatically and self-cleans after each stoppage with no dilution or change in the finishing product uniformity. It is said to deliver a highly uniform warp size with precision control of solids con-

centration, viscosity and degree of conversion.

R. L. Nagle, Edward Grosse, W. N. Dulaney, Haley Ector, H. A. Mitchell, D. A. Barnes, C. A. Adams, Crawford Garren, Lonnie McCall, B. O. Merritt, A. L. Woodington.

Standfast Dyers & Printers 1341
England
(Represented by Atkinson, Hasserick & Co.)

Standfast patent continuous molten metal dyeing unit for cellulosic woven fabrics. Speeds on the unit range from 50 y.p.m. for pigment padded and wet developed fabrics to 120 y.p.m. for leuco dyed fabrics.

A. Ogden, E. G. Stone, V. Hartley.

Steel Heddle Mfg. Co. 420
Philadelphia, Pa.
A complete line of flat steel heddles, harness frames, reeds, picker sticks and shuttles.

H. W. Fehr, J. J. Kaufmann Jr., F. H. Kaufmann, H. P. Goodwin, A. J. Kieny, G. D. Gill.

Steele Canvas Basket Co. Inc. 293
Cambridge, Mass.
Canvas baskets, trucks, hampers, bags and other canvas specialties.
Albert E. Pratley, Arnold J. Cecchi.

Stellamcor Inc. 1336
New York, N. Y.
(Representing La Durantre S.A., Louis Newmark Ltd., A. Carniti & C., Ateliers de Construction Gilbos. See individual listings for products.)

Sterling Engineering & Mfg. Co. 419
Wilkes-Barre, Pa.
Materials handling equipment — preparatory and spinning departments. (D.N.A.)*

Stewart-Warner Corp., Alemite Division 760
Chicago, Ill.
Lubrication equipment. (D.N.A.)*

Gebr. Stork & Co.'s Apparatenfabriken 826
Sweden
(See Cosa Corp.)

Stowe Woodward Inc. 280
Newton Upper Falls, Mass.
(D.N.A.)*

Svetema 1326
Sweden
(Represented by Ernest L. Frankl Associates)
(1) Svetema laboratory dye padder

A.T.M.E.

with control panel. (2) Pad-roll laboratory dye apparatus and control panel for pad-roll dyeing method and control. (3) Pad-roll bleach reaction laboratory unit. (4) One compartment of Svetema counter-current open width washing machine.

Bertil Melibin, O. Holmgren.

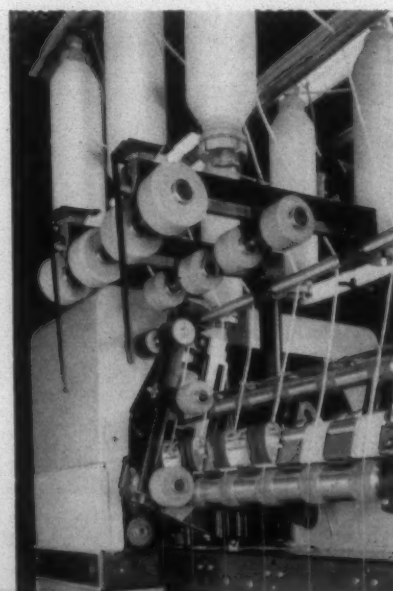
Sykes Inc. 402
Charlotte, N. C.
Accessory equipment, preparatory machines. (D.N.A.)*

Symatex 853
Belgium
Preparatory and accessory equipment, weaving and dyeing machinery. (D.N.A.)*

James Talcott Inc. 477
New York, N. Y.
Full house financing service; installment sales financing; equipment lease financing; and factoring.
Joseph A. Zeller, Daniel E. Grow, John Hart, Joseph F. Mannix.

Tattersall & Holdsworth's 1413
Holland
(Represented by Ernest L. Frankl)
Laboratory dye jig for dyeing small lots in full width.

Taylor-Emmett Controls Inc. 635
Akron, Ohio
(See Taylor Instrument Cos.)



SJ SPINNING FRAME—One of the features of the Saco-Loell exhibit will be the company's new SJ worsted spinning frame, a Gwaltney type unit featuring a double apron drafting assembly designed to take advantage of the frame's high speeds.

A.T.M.E.

Taylor Instrument Cos. 635
Rochester, N. Y.

(1) Taylor relative humidity transmitter for the measurement of relative humidity and the transmission of the corresponding proportionate air pressure signal. (2) An animated panel will illustrate an application of the Sensaire temperature transmitter and the 86K indicating control station. (3) Instruments for time-cycle control.

Harry Olson, Leslie Van Huben, C. L. Teschner, John F. Waples, George Zeiters, Robert Branigan.

G. H. Tennant Co. 1206
Minneapolis, Minn.

Model 40-E battery-powered sweeper is designed for congested areas. It is powered by two 12-v. batteries and cleans a 34" path. It has a front wheel drive. The Model E floor maintenance machine vacuums and waxes. It has a 21" path and operates on 115/230 v. single-phase 60 cy. a.c.

Joseph Harrou, Richard Crickmer, Robert Trost, Robert Guthrie, William Teague, Pat Manfra, Al Jackson, Robert Gault, Dallas Peel, Leonil Bass.

The Terrell Machine Co. 304
Charlotte, N. C.

(Representing W. Schlafhorst & Co.) Terrell will have a large unit of the latest type Schlafhorst Servoloom Autocopser in full operation. Already in operation in a number of American mills, the Autocopser features a fully automatic loading device to feed bobbins into receptacles for the Draper automatic filling magazine.

The Servoloom Autocopser is designed for high-quality, precision-built bobbins carrying a tip bunch, which is required on the Draper magazine. The tip bunch can be adjusted separately on each spindle, depending upon its desired length, location and firmness. The finished bobbins are

then loaded into the compartments of the Draper magazine by a device which works as an independent unit attached to each winding head; therefore, different yarns and counts can be quilled on each spindle. The magazine can then be placed directly on the loom, from where the loom takes over, unloading the compartments automatically and feeding directly into the transfer mechanism.

The manual plugging of rotary batteries, is, of course, eliminated. With the proper filling supply and the absence of the human element of battery hands, weave room efficiency and cloth quality can be improved considerably.

The combination of Servoloom Autocopsers and Draper AFM (Automatic Filling Magazine) can be used on all Draper looms of the X-series weaving cotton yarns, spun rayon, and other spun synthetic yarns, worsted and woolen yarns, and all kinds of blended yarns. One Autocopser spindle operating at a speed of 11,000 to 12,000 r.p.m. can produce enough filling to supply an average of three looms.

W. S. Terrell, B. T. Gavin, Helmut Deussen, M. H. Ridenhour, R. A. Moore, J. F. Notman, J. R. Hartmann, John E. Scott, all associated with Terrell Machine Co.; Dr. Walter Reiners, H. Ortmann and Herbert Kunkell of W. Schlafhorst, M. Gladbach, Germany.

Texnovo S.P.A. 1000
Italy
(See Snedeker & Co. Inc.)

Texplant Corp. 1032
Stamford, Conn.

(Representing Hanseatische Motoren G.m.b.H.)

(1) HMG-Auto-Gill—intersecting WR 58 with weight control and automatic can delivery. (2) Verilux-Luminaire—a new type of lighting duplicating natural north light.

Albert J. Lindell, M. Malcolm Kaye, Oskar Krake, John von Ow.

Textile Bulletin 92
Charlotte, N. C.
Reception booth.

Junius Smith, F. Roy Carey, James L. Prendergast, Jack Kissiah, John V. Lawing, Ben C. Thomas.

Textile Industries 415
Atlanta, Ga.
A textile publication.

Textile Machinery Import Co. 715
Morton, Pa.
(See Lansdowne Steel & Iron Co.)

Textile World 406
New York, N. Y.
A textile publication.

Textube Corp. 661
Stamford, Conn.
Accessory equipment for winding and spinning machinery. (D.N.A.)*

Textured Yarn Co. Inc. 31
New York, N. Y.
Reception booth.
Ira Schwartz, Irving Schwartz, Charles Weiner, Robert Stanley, Scott Alexander, Alan Milman, Stanton Freedman.

H. J. Theiler Corp. 1040
Whitinsville, Mass.
(Representing Ruti Machinery Works Ltd., Schweiter Ltd.)
(D.N.A.)*

Titan A/S 1227
Denmark
(See Edda International Corp.)

Tomlinsons (Rochdale) Ltd. 1328
Great Britain
(Represented by Atkinson, Haserick & Co.)
Auto-Zero raising machine.
Richard R. Clegg, Harold H. Pomfret.

The Torrington Co. 48
Torrington, Conn.

(1) Torrington bearings for textile machinery applications. (2) Drawn cup roller bearings. (4) Heavy duty roller bearings. (5) Needle thrust bearings. (6) Cam followers.

Donald E. Lewis, Raymond G. O'Connell, William J. Candler, Robert H. White, J. Robert Hull, Paul Glazier, Graham Whytlaw, Lawrence Paine, John R. Conboy.

Toscin Kogyo Co. 1148
Japan
(See Edward S. Rudnick)



Carolina Brush Co.

Manufacturers — Designers — Repairers

Textile Brushes

CHARLOTTE, N. C.

P. O. Box 3387

ED 2-5839

GASTONIA, N. C.

P. O. Box 588

UN 5-2422

Trumeter Co.
New York, N. Y.
(Representing Maag Bros.)

Trumeter counting and measuring instruments and the Maag inspection machine.

Eric Seligmann, Rene Jacobus, Tom Aydelette, Ted Huston.

Trutzschler & Co.
Germany

(Represented by Ernest L. Frankl Associates)

(1) Automatic bale plucking machine. (2) Complete picker line consisting of condenser, hopper feeder, beater and lap machine with automatic doffing device, electronically synchronized with pneumatic calender rolls for obtaining laps of 70 lbs.

Hans Trutzschler, Heinz Denckmann.

Tubular Textile Machinery Corp.

Woodside, L. I., N. Y.

(1) The Tube-Tex Reelax Jet dryer as designed for the slack drying of broad woven fabrics. (2) A horizontal plane folder for high-speed fabric plaiting. (3) A twin V-belt 10 h.p. vari-speed pulley. (4) An inverted steamer. (5) A single-stroke cutter for instantaneous fabric severing.

Eugene Cohn, Don Foreman, Lee Rothenberg Jr., Gene L. Bell.

Turbo Machine Co.
Lansdale, Pa.

Dyeing machines and finishing equipment. (D.N.A.)*

The Unistel Textile Machinery Corp.

Port Chester, N. Y.

Preparatory equipment for weaving; finishing equipment. (D.N.A.)*

U. S. Steel Corp.
Cleveland, Ohio
(D.N.A.)*

U. S. Textile Machine Co.
Scranton, Pa.

(1) Acme fiberglass tube-drive twister with power drive creel. (2) Acme s-wrap roll doubler-ring twister designed for plying fiberglass yarns. (3) Acme texturizer, a laboratory (single-spindle) unit counterpart of the company's full size machines for processing Taslan textured yarns. (4) Barmag 2-for-1 cotton twister. (5) Barmag draw twister and Barmag coner Models ESK-1 and 2. (6) Marquette roller bearing spindles, McHale molded nylon flyers and Utex belting.

A. W. Thomas Jr., Donald W.

714 Scheuer, Pacific J. Thomas, Jerome D. Gleitz, Chester L. Loveland, A. F. Lema, William P. Russell.

Uster Corp.
Charlotte, N. C.

The Ustermatic warp tying machine will be shown for the first time on an industrywide basis. The Ustermatic features speeds of up to 600 knots/minute. It can tie four different combinations of warps without the necessity of changing any mechanism or parts: (1) old and new warps with a lease; (2) old and new warps without a lease; (3) old warp without a lease, new with a lease; and (4) old warp with a lease, new without a lease.

Also to be shown are: (1) The Uster evenness tester with integrator spectrograph and recorders. (2) An imperfection indicator. (3) An automatic single-end strength tester. (4) The Uster Custom Tension Recordograph with the West Point fiber cohesion tester.

W. B. Floyd, Hans Winiger, A. Broccari, W. L. Boyd, V. H. Brockman, B. E. Sweet, J. R. Wright.

Utex Products, Division of
U. S. Textile Machine Co.
Scranton, Pa.

Preparatory equipment, twistors and coners for cotton; accessory supplies.

Vanderburgh & Co. Inc.
New York, N. Y.
(See Herzog-Auerbach & Co.)

A.T.M.E.

Van Vlaanderen Machne Co.
Paterson, N. J.

Dyeing and finishing equipment for silk and man-made fibers.

Veeder-Root Inc.
Hartford, Conn.

A complete line of textile counting devices for production and incentive programs including: single, double, triple pick and hank counters for looms and preparatory equipment; pre-determining counters for yardage control; and yardage counters for inspection equipment.

F. J. Swords, R. C. Conant, H. B. Huff, J. J. Simons, J. H. Yost, T. Nelson, A. E. Kallinich, G. H. Anthony.

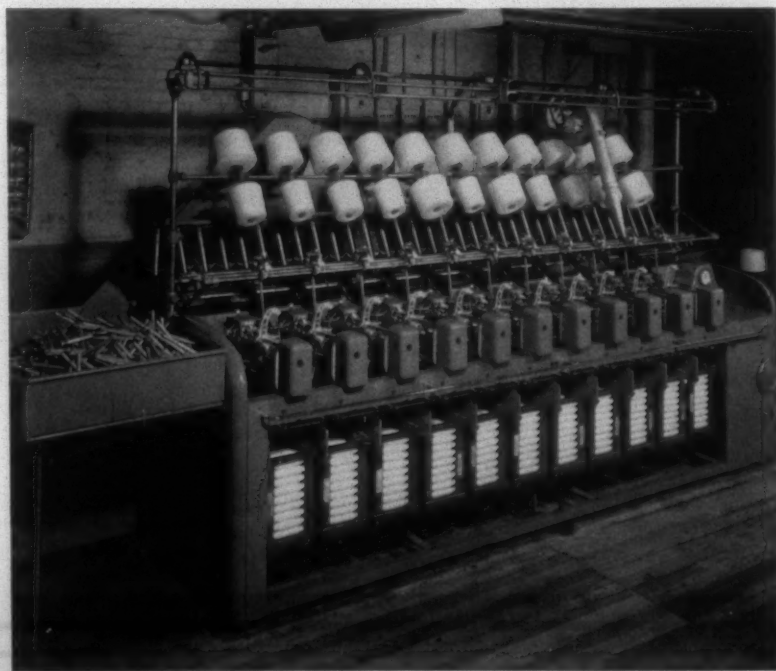
Venango Engineering Co.
Philadelphia, Pa.

Dyeing and drying equipment. (D.N.A.)*

Societe des Mecaniques Verdol
France

(Represented by the Baxter Corp.) Jacquard machines, accessory weaving equipment. (D.N.A.)*

WAK Industries
Charlotte, N. C.
A variety of counting devices. (D.N.A.)*



SERVOLOOM AUTOCOPSER—The latest type Schlafhorst Servoloom Autocopser will be displayed in Booth 304 by The Terrell Machine Co., Charlotte, N. C. The unit features a fully automatic loading device for feeding bobbins into receptacles for the Draper automatic filling magazine.

A.T.M.E.

Walton Laboratories Inc. 284
Irvington, N. J.

Atomizing type humidifiers: space models with air filters; space models without filters; and in-duct models.

J. B. Feldermann, J. R. Lewis, F. Hartwell, G. Lyons, A. Janks.

The Warner & Swasey Co. 327
Cleveland, Ohio

(1) Warner & Swasey pin drafter intersecting draw frame featuring automatic doffing and an infeed levelling device known as the Servo-Drafter. (2) Whirlwind twister winder processing nylon and polyethylene.

H. P. Balsom, A. F. Barney, L. M. Cole, H. B. Hunter, H. K. Jennings, R. O. Perrault, G. M. Phoenix, Sylvia Taylor, T. L. Stilwell, R. Whewell Jr.

Watson-Williams Mfg. Co. 672
Millbury, Mass.

(1) Weave-Ever shuttle made full thickness of resin impregnated and laminated fabric. (2) Complete line of Watson-Williams shuttles. (3) Emil Adolph tubes, quills and bobbins.

Hubert J. Watson, J. Kimball Watson, Howard S. Pellatt, Sutton M. Ebert, John Wyatt, Ray A. Norman.

Werner Machine Co. 135
Passaic, N. J.

(1) Heavy duty double removable beam jig for large diameter rolls, 5 h.p. drive furnished. (2) Combination tubercle examining machine with all automatic edge guiding on movable carriage, variable speed control, clutch operated. (3) Continuous 2-roll batcher with new air operated drive, automatic transfer, dual interlock tensionless safety system, and patented pin bar attachment for cutting of heavy poplins and gabardines without the use and expense of rotary cutters. (4) Air-controlled friction wind-up, which can be used as a clutch, variable speed drive or overdriven friction wind-up, can be foot controlled or hand operated. (5) 3-roll, rolling tension unit for uniform tension control of open width fabric. Tension is applied through an air-operated cylinder and patented brake block. (6) Aluminum tension brakes with removable brake inserts. (7) Cloth oscillator, self-propelled by cloth travel for preventing selvage build-up. Adjustable oscillation from 1/2 to 1 1/2". (8) Automatic slot sealers for vacuum operated suction slots. Prevents short circuiting of slot and assures maximum extraction. (9) Air control systems available for loads of 5 to 30 tons in either single or double control panels. Air systems of all types engineered to requirements. (10) Universal print machine fitting gear featuring easily

changed spur gears for varying size copper shells.

Werner P. Rose, Paul Frederick Rose, Alfred R. Gessinger, Robert E. Kuhn.

Werner Textile Consultants 612
New York, N. Y.

Textile management consulting service.

H. L. Werner, R. M. Ashner, J. C. Werner, J. P. Mills, C. W. Bendigo.

West Point Foundry Machine Co. 1534
West Point, Ga.

Westinghouse Electric Corp. 102
Pittsburgh, Pa.
Motors and drives. (D.N.A.)*

Whitin Machine Works 212
Whitinsville, Mass.

(1) An entirely new 14x7" roving frame designed to run with flyer speeds up to 1,000 r.p.m. It reportedly has many new features to secure more uniform roving and maximum bobbin weights. (2) A new worsted comber—a 6-head machine running at 125 n.p.m. Its production is said to be about 70 lbs./hr. with efficient nep removal, a broad range of noil extraction and selective removal of short fibers only with very low non-uniformity percentage of sliver. Slivers are deposited in 18x36" cans in front of each head. (3) The Flex-Spin wool spinning frame with up to 16" traverse, reciprocating ring and spindle rail motion, single balloon control ring, and a heavy duty head-end. It is available in gauges from 4 1/2 to 7 1/2" and in appropriate spindleage for each gauge. (4) Super J comber capable of processing laps weighing up to 1,200 grains/yard on the Whitin Super Lap machine. (5) Whitin Super Lap machine for the preparation of comber laps. (6) A 4-delivery Even-Draft drawing frame with speeds up to 600 f.p.m. on carded and 450 f.p.m. on combed. The unit features a new V-belt coiler gear, improved pneumatic waste removal and additional anti-friction bearings. (7) The Pacemaker P3 Twister with straight line yarn delivery path, increased use of anti-friction bearings, vibration absorbing construction, steel pulley drive and other features for production of low twist filament yarns. (8) The Commodore, a heavy duty, 10" gauge, 8" ring twister especially suited to the large package, high production of knotless yarns for the tire cord industry. (9) The Whitin-ARCT false twist machine (Booth 1153), manufactured in France and designed for processing thermoplastic yarns of the stretch, crimp or torque type.

Wilson-Longbottom Ltd. 1432
Great Brtatin
(Representing Lambert S.P.R.L.)

(1) Double shuttle face-to-face Wilton and velvet carpet loom with comprehensive stop motions; large diameter beams with side loading arrangement for the inside bottom beam to facilitate quick beam changing; new type positive heddle connections to the underside of the heddle frames only with single point adjustment for fixing shed angles; positive pile feed delivery motion. The loom will be operating at 100 double p.p.m. giving an effective 200 p.p.m. and will be weaving a velvet quality from hard twist yarn, 9 rows per inch. (2) Jacquards will be on exhibition in connection with Samuel Dracup & Sons and will include a double shuttle divided pile jacquard suitable for mounting on the loom on exhibition. (3) A single-shuttle cop machine for heavy yarns including jute will be on demonstration. Ian S. Porter, J. Cornall.

W. W. Windle Co. 348
Millbury, Mass.

Preparatory, bailing and bagging machinery. (D.N.A.)*

Winsor & Jerauld Mfg. Co. 107
Providence, R. I.

New designed heavy duty wide parallel rail T-5 tenter frame with high speed No. 12M true roller tenter chain as well as the conveyor type openers and tenter rail guides.

Edward Wharmby, Albert J. Cole, Cecil C. Keyworth, Matthew M. Zuck

Peter Wolters, Kratzenfabrik & Maschinenfabrik & Co. 408
West Germany

(Represented by B. S. Roy)
Accessory equipment for spinning. (D.N.A.)*

Woolart Mills 1318
New York, N. Y.

(Representing Heinz Hergert)
Finishing equipment for woolsens. (D.N.A.)*

Woonsocket Napping Machinery Co. 138
Woonsocket R. I.

(1) A double-action napping machine (Booth 138). (2) A new high-speed knit goods napping machine (Booth 1105).

Andrew McGoldrick, Thomas O'Hara, Peter Malay, William McGoldrick, Eugene Pouliot, Rene Heroux Jr.

Yeomans Textile Machinery Co. 935
Spartanburg, S. C.

(See Scharer Textile Machine Works).

Alfred Zeffner & Co. 1538
West Germany

Accessory mill equipment, humidifiers.

*Details not available.

Import Problem Monopolizes Discussions At Eleventh Annual A.C.M.I. Meeting

INDUSTRY SPOKESMEN CONCEDE CONGRESSIONAL ACTION ONLY REAL HOPE IN IMPLEMENTING TEXTILE QUOTA SYSTEM

THE immediate future for the textile industry promises continuing frustrations. Chief among them is the increasing flow of imports. No means are in sight for curbing them, and their volume is sure to be stepped up.

This was the consensus of top A.C.M.I. members taking part in the institute's eleventh annual meeting April 6-9 at Bal Harbour, Fla. As always, the subject evoked considerable comment—most of it general, but some of it promising to be constructive. An indication that the A.C.M.I. is formulating new battle strategy in wrestling with the problem was given by the association's now "lame duck" president, James A. Chapman of Inman and Riverdale Mills, Inman, S. C.

Speaking at the opening session, President Chapman pointed out: "It is increasingly apparent that the textile import problem is not solely a cotton . . . problem. . . . It is truly a textile problem. . . . The cotton segment . . . by itself, cannot obtain meaningful and lasting relief under existing policies. The whole textile industry, by itself, cannot expect relief under present policies.

"In fact, no industry, by itself, can expect relief under present policies.

" . . . Actions, or lack of actions, by the executive branch of the government—under both Democratic and Republican Administrations—have demonstrated clearly that the only real and lasting solution to this problem is the writing of some new rules of the game by Congress itself.

"You will be interested to know that the . . . (A.C.M.I. is) giving much thought to plans for just such a co-ordinated effort in the future."

He did not elaborate either on the course these plans might take or when they will be resolved to the point they can be considered a "co-ordinated effort." But at the same time, by conceding that nothing has been gained by the previous tactic of kneeling at the White House doorstep, the indicated change of pace and course of pursuit constitutes the most candid evaluation of the industry's malignant dilemma.

Members of a panel discussion on imports echoed President Chapman's concern, urging that all segments of the industry band together in a common effort toward a solution. R. Houston Jewell of Crystal Springs Bleachery, mod-

erator of the panel, agreed that the ultimate answer to the problem lies in a quota system, and that for this system the industry must turn to Congress. At the same time, he said, the industry will continue to obtain recognition of the need for a quota system not only through action before the Tariff Commission but any way it can.

Serving on the panel as representatives of their segments of the industry were Marshall Y. Cooper, Harriet & Henderson Cotton Mills, Henderson, N. C.; Seabury Stanton, Berkshire-Hathaway Inc., New Bedford, Mass.; Robert M. Schwarzenbach, Schwarzenbach-Huber Co., New York; and W. Clair Harris, Southern Garment Manufacturers Association.

Specific Action Needed

Invited by the panel to comment on the import situation, Robert T. Stevens, president of J. P. Stevens & Co., speaking from the floor, offered the observation that it is time for the industry to come up with specific, concrete suggestions and proposals that can be passed along to Congress and all government agencies. He called for individual action to augment the group efforts of the industry; and offered to discuss with any interested parties a number of specific proposals he considered starting points toward a more aggressive approach to the problem of imports. Two days later, at the closing Saturday business session, he was again given the floor, at which time he presented the following suggestions:

(1) The industry should run more public service advertisements in both consumer and trade publications. And it should try to get good public relations articles published in the big circulation consumer magazines.

(2) The industry should contact other industries and other people who are similarly feeling or beginning to feel the effects of low wage imports.

(3) The industry should be better represented at Congressional and other government hearings in which textiles have a stake. (He pointed out that he and J. Craig Smith of Avondale Mills were the only manufacturers in attendance at the March hearings of the Tariff Commission. Import interests, on the other hand, were there in full force.)

(4) Individual members of the industry should keep up a barrage of mail to Secretaries Mueller, Anderson and

Herter, keeping them up to date on the textile situation and how they are being affected by the policies of these respective departments. He suggested also that now was the time to query 1960 political candidates on their feelings toward imports and other issues.

(5) Efforts should be made to get the import problem included in the platforms of major political parties. He said the problem could be, should be a campaign issue.

(6) The industry might consider reviving the "Buy American" campaign abandoned some months ago.

(7) Steps should be taken to insure that all imports are properly labeled so that American consumers can know what they are buying and from where.

(8) The industry should seek the support of state legislatures as a first step toward carrying quota appeals to Congress.

(9) The industry should begin now planning a sizable meeting in Washington next February for the purpose of bringing the new Congress up to date on the import problem.

He asked his audience two closing questions: (1) Are you going to use foreign goods in your operation? (2) Are you going to use foreign machinery? "It is obvious," he remarked, "that it will not help this program if your answers to these questions are in the affirmative."

Saturday Session

In addition to Mr. Stevens, two other prominent members of the institute were heard from at the Saturday business session. Halbert Jones of Waverly Mills, Laurinburg, N. C.,

immediate past president of the A.C.M.I. and current chairman of its foreign trade committee, presided over the added portion of the Saturday session, calling on Roger Milliken of Deering, Milliken, and Jackson E. Spears Jr., Burlington Industries, as well as Mr. Stevens.

Group Action

Mr. Spears, as did Mr. Stevens, urged members to contact other industries being hurt by imports in order to get the benefit of their thinking on the over-all import problem. He suggested that a committee consisting of Robert C. Jackson, executive vice-president of A.C.M.I.; Edwin Wilkinson, president of the National Association of Wool Manufacturers; and William T. Sullivan, president of the Northern Textile Association, get together in Washington as soon as possible for a briefing on what course the industry should take to get a more positive program going on the import situation. The committee would take immediate steps to get across to proper authorities the full story of the industry.

G.A.T.T. Representation

Mr. Milliken, complaining against the government's practice of excluding textile industry representation at G.A.T.T. tariff hearings, proposed sending a wire to President Eisenhower and Vice-President Nixon urgently requesting that arrangements be made to have men selected by the textile industry available as voting members at future textile negotiations. The telegram was approved unanimously.

New specialized chemical fibers will become available to



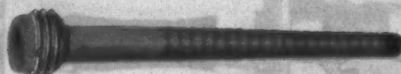
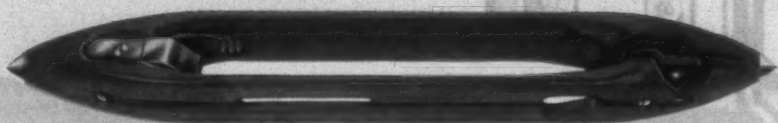
Ruffin, Cheatham, Chapman, Hall

James A. Chapman, A.C.M.I. president, is shown with newly elected officers of the institute. To be installed October 1 as successor to Chapman is J. M. Cheatham, president of Dundee Mills, Griffin, Ga. Elevated to first vice-president is R. Dave Hall of Belmont, N. C. Succeeding Hall as second vice-president is William H. Huffin, Erwin Mills, Durham, N. C.

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The Durapic plastic Picker has a remarkably long life, and gives unequalled service with fewer replacements.

Southern Picker Sticks have long been famous for their stamina and strength, with a variety of selection to meet every requirement.

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the textile industry in unprecedented numbers in the next few years, according to A. E. Buchanan Jr., The Du Pont Co., a featured speaker at the convention's Friday morning session.

The Du Pont Co., Buchanan said, expects as much as two-thirds of its fiber products on the market five or six years from now will be new improvements on or additions to the fibers being offered today. The company does not expect the appearance of any completely new general purpose fibers, but rather fibers that will be very specialized for particular uses.

Management And The Balance Sheet

A feature of the Friday business session was a panel of speakers presented under the theme, "Management and the Balance Sheet." Panel members, in the order of their appearance, spoke on (comments are abstracts):

Joseph L. Lanier, West Point Mfg. Co., "Research and the Balance Sheet": "The fact of the matter is that whether we like it or not we are living in an age of technical progress and if a company worships at the shrine of the *status quo*, it is likely that its balance sheet will suffer."

"... It is necessary that the purposes of a research program be defined. Some concerns, I am afraid, have failed to do this and consequently have found themselves too busily engaged in chasing intriguing questions which, when caught, amounted to little or nothing."

"... Purposes that are practical, that are economically sound and that avoid duplication of efforts by others should be established as a general policy and then every proposed project should be examined in the light of these measures."

"... Having set forth the purposes of research, a company should then devise a program to implement its purposes. Too often lip service is given to research and a company with good intentions will fail to really organize a program, provide facilities, or secure an adequate staff."

Marvin Cross, Greenwood Mills Inc., "Quality and the Marketing of Textiles": "One sure way to minimize the effects of a protracted downswing in business is to have a product that is wanted and of proven quality. ... Not so many years ago mills were quite content to receive preference for their goods but they have since learned that their superior quality product will bring not only preference but a premium price as well."

"... If you are going to make and merchandise quality, don't expect miracles. Don't get discouraged if you don't see quick results. Some mills have been working on this for 40 years."

"... Making quality fabrics means the expenditure of large amounts of money for the proper, modern equipment necessary to produce quality. It means earmarking considerably larger amounts for better cotton ... and it means a tremendous and continuing amount of time and effort to train your people to think only in terms of quality."

Frederick B. Dent, Mayfair Mills, "Modernization for Survival": "The term 'modernization' permeates every facet of a mill's activities—personnel, fiber selection, quality control, housekeeping, training, supervision, industrial engineering, costing and all the rest."

"... Modernization has justified itself in stimulating an

increase of productivity per manhour in the industry averaging more than 50% in the past 15 years."

"... Modernization has justified itself in enabling the industry to produce better fabrics at costs controlled at essentially the level of 15 years ago despite inflationary pressures."

Politics Important

William H. Ruffin, Erwin Mills Inc., "Politics Calls the Businessman": "It will take state and local individuals and organizations, headed by men who know the state and local needs and candidates, to reverse the trend of recent years to tax away capital, tax away jobs and tax away progress."

"... We businessmen are not out to run the country, but to see that the right kind of men serve in public office. What we are seeking is the kind of government that will enable America to meet the future confidently and to realize its full potential. We are seeking security for a way of doing business, and not for any individual business."

Election Of Officers

In an election of officers at the closing session of the convention, J. M. Cheatham, president of Dundee Mills, Griffin, Ga., was elevated to the presidency to succeed James A. Chapman, effective October 1. R. Dave Hall, treasurer and secretary of Climax Spinning Co., Belmont, N. C., moved up from second to first vice-president; and William H. Ruffin, president of Erwin Mills, Durham, N. C., was named second vice-president.

New directors, elected for three-year terms, include F. B. Dent, Mayfair Mills, Arcadia, S. C.; J. Burton Frierson, Dixie Mercerizing Co., Chattanooga, Tenn.; W. J. Holman Jr., Chicopee Mfg. Co., New Brunswick, N. J.; Julian T. Hightower, Thomaston Mills, Thomaston, Ga.; Don S. Holt, Cannon Mills, Kannapolis, N. C.; James P. Marion, Bloomsburg Mills, Bloomsburg, Pa.; Roger Milliken, Monarch Mills, Union, S. C.; John E. Reeves, Reeves Bros. Inc., New York City; Jackson E. Spears, Burlington Industries, New York City; and Hal W. Little, Little Cotton Mfg. Co., Wadesboro, N. C. Mr. Little was elected to fill the unexpired portion of the term of Mr. Ruffin, new second vice-president.

A.C.M.I. Staff Realignment

In announcing a program of expanding and strengthening the A.C.M.I., the association's directors reported that the A.C.M.I. Washington office will be reorganized with the establishment of a Government Relations Division to direct all relationships with the government. The new division will involve a new foreign trade department under the direction of Dr. R. Buford Brandis; a new labor-taxation department under Charles G. Caffrey; an economic information department under Donald J. May, who will also direct activities in a new raw materials department; and a new information service department.

A. Lee Parsons of the Washington office will become director of the institute's New York office May 1. W. Ray Shockley was elected assistant secretary-treasurer with offices in Charlotte. Re-elected executive vice-president and secretary-treasurer, respectively, were Robert C. Jackson and Sadler Love.

Cotton Fiber Quality And Mill Operation

By JIM M. LITTLE, S. C. MAYNE JR.
and EARL E. BERKLEY*

GENERALLY speaking, fiber damage occurs in three areas: harvesting, ginning and mill processing. In order to get a better picture of the over-all situation, each of these areas will be discussed separately.

Defoliation

Defoliation of the plants prior to harvesting has become common since the advent of the cotton stripper and picker. Defoliation is necessary for good harvesting conditions, and we understand that certain defects caused by the use of defoliant and desiccants must be tolerated. However, it is a good idea to discuss the causes of these defects since most of them can be kept to a minimum if they are fully understood.

The greatest damage to cotton when it is defoliated or desiccated is loss in yield. There is also an increase in the amount of fine fiber 3.4 and below on the Micronaire, which sells at a discount, particularly if the Micronaire is 2.5 and below. If the plants are defoliated before the cotton reaches full maturity, the seed as well as the lint stops growing. When the immature seed dries, the meat is not large enough to fill the cavity of the seed, and the seedcoat is therefore partially hollow. When the gin saw strikes the seed on the hollow side, the relatively weak seedcoat breaks. The broken fragments still have fibers attached and are extremely difficult to remove from the lint. In fact, there is no known cleaning process, except for a chemical treatment, that will remove them efficiently. These seedcoat fragments have become more abundant in the cotton in the past three years, and they come from several sources, only one of which is immature seeds. Other sources from which they stem will be mentioned in connection with other phases of harvesting and ginning.

New Harvesting Techniques

Harvesting has changed very rapidly since the last war. This year it is estimated that 90% of the California cotton was harvested with machinery. We do not yet have an estimate on the percentage of the Arizona crop picked with spindle pickers, but it is relatively high. Hand picking today is much rougher than it was in previous years. We have in the laboratory some hand-picked cotton from the Pecos area which contains quite a large number of burs, sticks and trash that would not have been present in hand-picked cotton some 30 years ago.

Most of the hand-harvested cotton is now snapped rather than picked; the bur is taken with the cotton, and in many

cases the hand laborers strip the bolls from the plant and take with the bolls large quantities of leaves. Hand-harvested cotton, therefore, varies tremendously in cleanliness, and sometimes the trash content exceeds that in cotton harvested with the spindle picker. The trash downgrades the cotton, and it is necessary to remove a maximum percentage of it in the gin in order to produce good grades. The spindle picker does a good job if it is kept clean and in proper adjustment, but if it is carelessly used, particularly if excess water is used on the spindles, appreciable damage results to the cotton.

Chlorophyll Stains

The timing of the ginning after defoliation is also very important. If the plants are allowed to stand until new leaves start to grow, it is almost impossible to avoid chlorophyll stains. Chlorophyll stains show up green on the cotton when it is picked, but they turn brown to rust-red if the cotton remains in storage for six months or longer. These stains downgrade the cotton and cause losses to the producers.

If the picker is not properly adjusted, spindle twists will result. We get a great deal of cotton containing clumps of badly twisted cotton which was picked by spindle pickers. These lumps of twisted cotton must be removed by the gin machinery and either become a loss as part of the waste or, if permitted to remain in the cotton, downgrade the sample. If the spindle picker is not kept clean, it will also leave spots in the cotton. Water damage can be severe also if the cotton stands in the trailer long enough to heat, since biological decay results from excess water. Even if the water does not remain in the cotton long enough to cause microbiological growth, it will reduce the sheen and cause the cotton to be grey or at least a flat white.

Damage From Drying

Drying is necessary in modern gins and a certain amount of damage must be tolerated, but with proper care this damage can be kept to a minimum. Seed cotton that is picked immediately after the bolls open before drying contains soft seed. The fiber can be dried in the gin dryer, but the seed themselves remain soft. When ginning cotton of this type, the seedcoats tend to pull loose from the seed with fibers attached to them, which is another source of seedcoat fragments.

Overdried cotton fibers tend to break more readily than moist fibers, and careless use of heat in drying will result in broken fibers and irregular staple. The broken fibers may or may not be obvious to classers in assessing staple length, but they will reduce the spinning quality. Overdried cotton may or may not have the usual moisture regain, and, in any event, the rate of regain will be reduced. When the cotton is shipped directly to the mill, this slow rate of

*Anderson, Clayton & Co. laboratory system, Memphis, Tenn. Presented by Mr. Little before the Georgia mill buyers, Atlanta, Ga., March 25, 1960.

absorption becomes a serious factor in processing, and it has caused millions of dollars of loss, particularly in the early Fall and in mills in cold countries where buildings are heated.

Color Problem

The careless use of heat in drying will also add color to the cotton. Cotton that is overdried, particularly if it has been heated to elevated temperatures when dried below 5% moisture, will change color. The color may not show up immediately and it may not become pronounced, depending upon how long the heat was on the cotton, how low the moisture content, and how high the temperature. Overdried cotton, particularly that dried at high temperatures, tends to turn yellow spotted and ultimately creamy to tinged after remaining in storage for 6 to 12 months. This phase of color in cotton is still in need of careful study.

The bur and stick extractors required when processing stripped cotton tend to break up the leaf trash when they are overcrowded. The overhead cleaners, like all of the other machines designed to clean cotton, do a good job when run at the proper speeds and settings, but they will seriously damage overdried cotton, particularly when the cleaners are overcrowded.

Ginning Damage

The ginning process itself tends to break the fibers, but the saw gin can be tolerated unless abused. If the seed roll is too tight or the production per hour is too small or excessive, fiber breakage may become serious. It is my understanding that most gins are designed to run best when ginning at a relatively narrow range of production. If the feed is less or greater than this range, damage will occur. When the seed rolls are too tight, the motes may be broken and the seeds chipped, thus leaving seedcoat fragments in the lint; also, the longer linters are removed. They tend to be much coarser than the lint fibers and are thrown out in later processing as waste or tend to make neps if not eliminated.

If the gin is overcrowded, or if the cotton is too wet, rough preparation may result. Wet cotton does not gin well, nor does overdried cotton, although the latter will gin much faster than properly dried cotton. Overdried cotton can also be cleaned to give higher grades.

Although ginning moist cotton may result in rough preparation, fiber damage, particularly fiber breakage, is less than when ginning overdried cotton. Under current con-

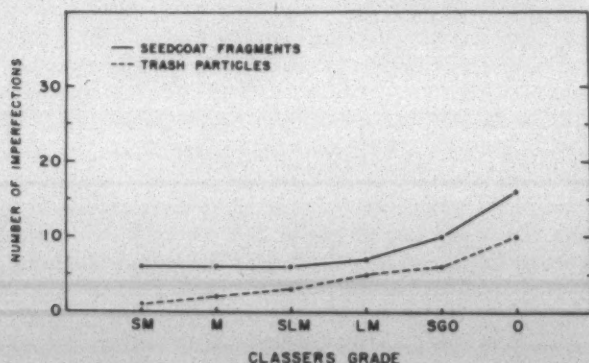


Fig. 1—Seedcoat fragments and trash particles in yarn made from various grades of cotton.

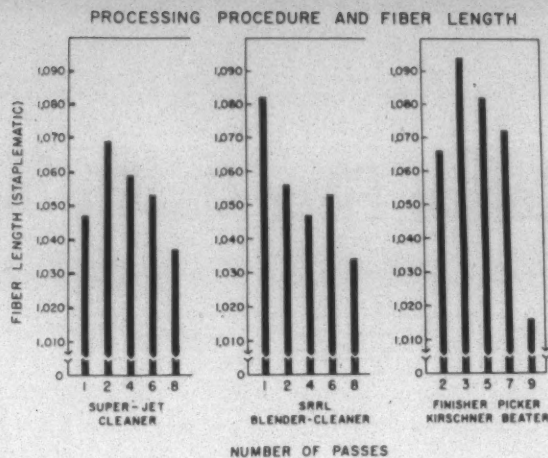


Fig. 2—Fiber length (Staplelength) after additional passes through opening, cleaning and picking machinery.

ditions the rough preparation is indicative of good spinning quality.

Lint Cleaners

Lint cleaners designed to remove additional trash from the ginned lint have both assets and defects. The greatest fiber damage from the point of view of fiber breakage apparently occurs in the saw-type lint cleaners. Our studies are not yet complete, but it is indicated that fiber breakage in the saw-type lint cleaner is proportional to the degree of drying at a given rate of feed and vice-versa.

The saw-type lint cleaner also tends to felt the cotton, i.e., make it into a mat which will stick together like cotton batting used in quilts. It is not uncommon, therefore, for cotton passing through certain makes of saw-type lint cleaners to be improved in classer's grade while at the same time the mill processing efficiency is decreased. There have been some tests made to show that the percentage of trash is not appreciably reduced, but the trash is ground up in the cotton and hidden by the felting of the fiber so that higher grades are assessed by the classer. The increase in short fibers will often be essentially equal to or occasionally greater than the reduction in trash so that the total waste may be increased as the classer's grade is improved.

The saw-type lint cleaner is also another source of seed-

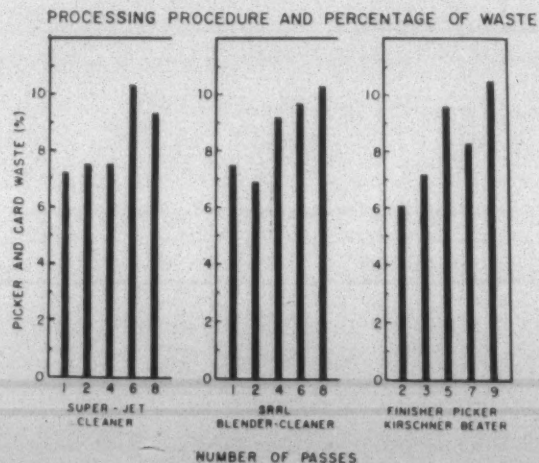


Fig. 3—Picker and card waste with additional passes through opening, cleaning and picking machinery.

coat fragments. The motes, when whipped against the grid bars of the lint cleaner, tend to break up, leaving fragments with fibers attached to them in the lint. Yarns made from Strict Middling cottons contain the same number of seed-coat fragments as those made from Middling or Strict Low Middling samples (Fig. 1). Similarly, the trash particles are reduced in size, making it more difficult to remove them in mill processing. In addition to these difficulties, considerable usable fiber is lost in the lint cleaner. In some installations I understand that this waste from the lint cleaner can be salvaged and sold.

Damage In Mill Processing

Up until now the discussion has covered only fiber damage which occurs before it arrives at the mill. Unfortunately, damage continues as the mills process the cotton into yarn and cloth. In some cases, where excessive machinery is used, the damage is even greater than that which occurs in harvesting and ginning. In order to better understand this, we have studied the effect of mill processing on cotton fiber. The study does not cover all types of opening and cleaning equipment, nor was it designed to duplicate normal mill procedure, but it was made to show the effect of machinery on cotton.

Normally one pass through a given machine when it is in good condition does not damage cotton enough to cause concern, but repeated beating operations break the fiber and cause it to process less efficiently. This fiber breakage is shown in Fig. 2. Effects on picker and card waste are

PROCESSING PROCEDURE AND NEPS IN CARD WEB

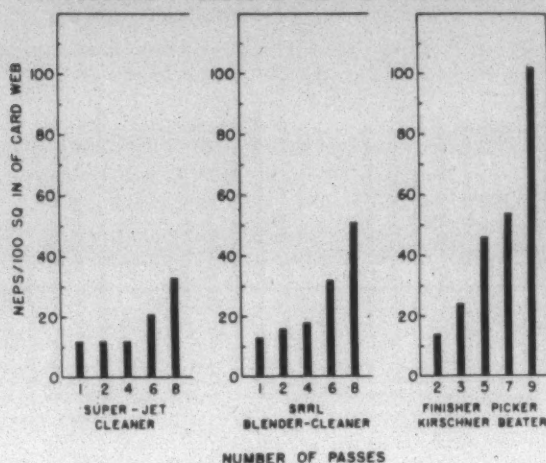
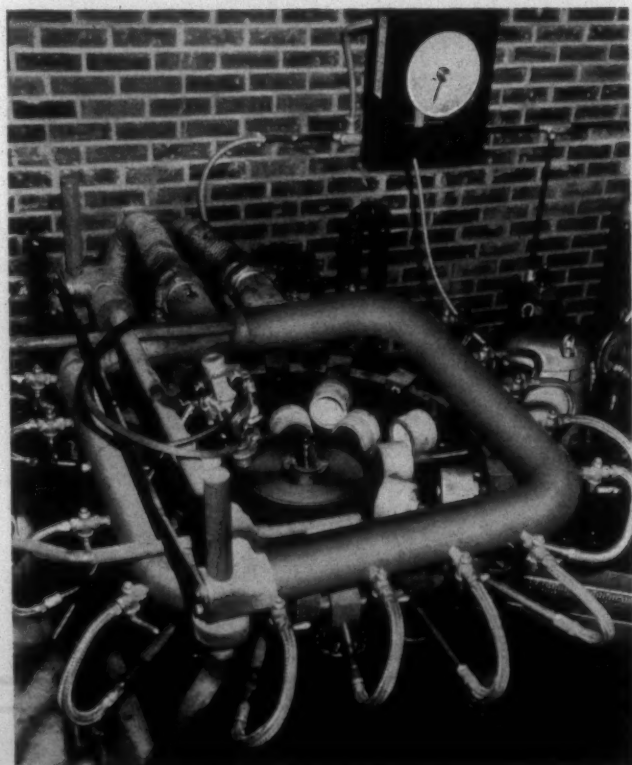


Fig. 4—Neps in the card web and increasing numbers of passes through opening, cleaning and picking machinery.

shown in Fig. 3. You will note that the percentage of waste removed goes up with additional passes through the various machines. This does not mean that the actual amount of trash removed is increased. Rather, the increase in waste corresponds to the increase in fiber breakage and represents a loss of fiber.

Fig. 4 shows the effect on neps in the card web. You will note that the increase in neps for the first four passes on the Super-Jet was insignificant, but that additional passes

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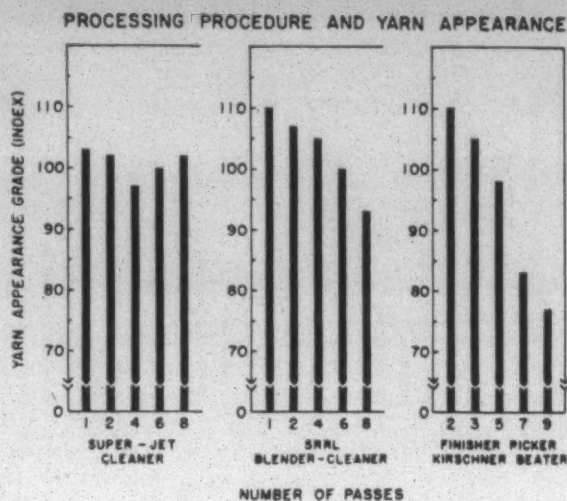


Fig. 5—Yarn appearance grades and increasing numbers of passes through opening, cleaning and picking machinery.

caused a sharp increase in nep count. It should be pointed out here that the opener in front of our Super-Jet is not a standard mill unit. The opener which feeds the Super-Jet is a special design using saws as an opener, but it is not a harsh treatment. However, excessive passes through even a gentle machine such as this will also cause damage.

There was a gradual increase in neps for the S.R.R.L. Opener-Blender-Cleaner through the first four passes and a sharp increase after that point. The Kirschner beater caused a sharp increase in neps from the beginning.

Yarn appearance is shown in Fig. 5. The additional passes through the Super-Jet had very little effect on yarn appearance. Both the S.R.R.L. and the Kirschner beater caused lower appearance with each additional pass through these units. Yarn strength is shown in Fig. 6 and has a very similar trend to the yarn appearance.

In order to determine if similar effects would result from mill processes, we measured the percentage of fibers $\frac{9}{16}$ -inch and shorter in the cotton after each process in six different opening and picking lines in cotton mills. The results of this test are shown in Fig. 7.

Generally, lines 1 through 5 show an increase in short fiber content after one or two beating operations. The short

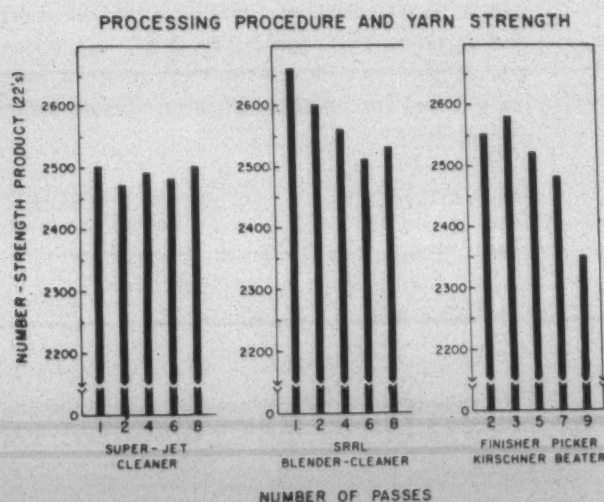


Fig. 6—Yarn strengths and increasing numbers of passes through opening, cleaning and picking machinery.

Fig. 7

Percentage Of Fibers $\frac{9}{16}$ -Inch and Shorter After Various Processes In The Opening Lines

Treatment	1	2	3	4	5	6
Blending Apron	18.9					
No. 15 Opener		21.2	20.9	19.8	22.6	20.2
Opener Beater	24.1	23.8	22.7	23.8	19.0	
Cleaning Beater	21.4	21.6	21.4	19.5	22.7	
Cleaning Beater	20.0	21.0	21.1	21.4	22.2	18.2
Finisher Picker						
(Kirschner Beater)	23.2	25.8	23.3	22.6	23.8	18.9

fiber content then decreases, only to increase again following the Kirschner beater. The average short fiber increase was 3.06%, which is an increase of 14.8% based on the original short fiber content. Line 6, which by-passed two cleaning units, actually showed a decrease in short fiber, but this probably would not hold true with additional testing. Yarn appearance and yarn strength decreased as the number of beating units were increased in the mill.

Another mill test was conducted in which the opening line was composed of hopper feeders, Superior cleaners, Axi-Flo cleaner, No. 11 and 12 combinations, and two-beater pickers. After considerable experimentation, this line was reduced to hopper feeders, Superior cleaner, No. 11 and 12 combination and one-beater pickers. The yarn appearance and yarn strengths were improved and the cloth was much cleaner. The pickers are now operating with only one beater, and it is my understanding that the results are superior to those formerly obtained with all the equipment in operation.

Minimum Handling

Based on our research findings in harvesting, ginning and mill processing, we recommend to all cotton mills that they reduce the number of mechanical treatments to an absolute minimum, particularly when using high grade cotton. In so doing, improved yarn and fabric quality will be possible using the current production of cotton, even though some of it has been damaged.

Granted, this is not ideal, but neither you nor I can change the leopard's spots until we can offer a price difference based on intrinsic quality at the producer level. We particularly recommend that units which hold the cotton with feed rolls while beating it be reduced to one for Middling and higher grades and to a bare minimum for lower grades. Let us hope that the day will soon come again when the cotton farmers will benefit by his efforts to produce the fiber having the qualities desired by his customer, the spinner, and will therefore insist that the ginner preserve the maximum inherent spinning value of the cotton. Then, and only then, premiums paid for higher qualities will result in better cotton and higher quality yarn, and we can talk about fiber quality instead of fiber damage.

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A Measurement Of Combing Efficiency

USING THE METHOD OUTLINED IN THIS PAPER
COMBER EFFICIENCY CAN NOW BE DETERMINED

By JACK SIMPSON and
GEORGE F. RUPPENICKER JR.
Southern Regional Research Laboratory*

SINCE combed cotton yarns are used in the higher priced fabrics and threads and are closely identified with quality products, it follows that the management of a combed yarn mill would be continually concerned with the efficiency of its combers in removing short fibers and retaining the long fibers in the comber sliver. A method of measuring this efficiency and expressing it mathematically would aid quality control departments in maintaining optimum settings and timings on the individual combers. Also it would be useful in evaluating the performance of new combing equipment, new processing techniques and new cotton varieties.



Simpson



Ruppenicker

In the past a visual comparison of the Suter Webb¹ fiber array of the cotton before and after combing was used to determine combing efficiency. The inadequacy of this method is that it does not give a precise mathematical figure, but only visual comparisons of the arrays and in many cases it would be difficult to determine the most efficient of combers or combing methods under consideration.

A decided improvement in the measurement of combing efficiency² was developed by Saco-Lowell in 1953. This method utilizes the Suter Webb array of the comber noils and the comber sliver. The per cent by weight of fibers of each fiber length group of both the noils and sliver is converted into per cent of sliver lap by multiplying the sliver by (100 minus the per cent noils removed) and the noils by (per cent noils removed). This percentage of lap for both the noils and sliver is plotted against fiber length in inches. An arbitrarily selected distance to the left and right of the intersection of the curves formed by these plots embraces what is called a *neutral zone*. It is stated that all fibers to the left of this zone should be in the noils, and all fibers to the right should be in the sliver. The *combing deficiency* is designated as the percentage of sliver that is to the left of this zone, i.e., the amount of short fibers in the sliver. The *detaching deficiency* is designated as the percentage of comber noils that is to the right of this zone,

i.e., the amount of long fibers in the noils. The *combing and detaching efficiencies* are 100 minus these respective values. Although this method represents quite an improvement over the mere visual comparison of Suter Webb arrays, it has several drawbacks. The main one being that there is no definite demarcation or partition line between the sliver and the noil, but only an arbitrarily selected one as indicated in the study.²

Calculations based on this concept would lead to mathematical inconsistencies. It is also evident that there should be some method of assigning varying degrees of importance to the fibers of the various length groups for those being either extracted or retained by the combing operation. That is, when removing 15% noils of a certain cotton, it is certainly more important to remove all the fibers in the $\frac{1}{16}$ -inch length group than all of those in the $\frac{7}{16}$ -inch length group. This is evident from a study³ on the effect of the fiber length distribution on processing efficiency and yarn quality. The present study is devoted to developing a combing efficiency formula which will overcome the difficulties listed above.

Materials And Methods

The processing machinery used for this study⁴ was as follows: Whitin¹ two-process picker and revolving flat top card; Whitin and Saco-Lowell four-roll drawing frames with synthetic covered top rolls; Whitin $11\frac{3}{4}$ -inch sliver lap machine; and Whitin Model D-4 comber.

The cotton variety used in the study was a Pima S-1, with its fiber properties listed in Table I. Fiber properties were determined by A.S.T.M. methods.¹

Measurement Of Combing Efficiency

To examine the principles necessary for a combing efficiency measurement, the fiber distribution for a hypothetical cotton is shown in Table II, Column B.

Let it be desired to remove 20% noils from this hypothetical cotton and then to measure the efficiencies of two hypothetical combing operations (1 and 2). A perfect 20% noil removal would separate the sliver and noils into Columns C and D, respectively. However, the noil removal is never a perfect job of length group separation, and two different combers might separate the sliver and noils according to the groups E and G and F and H. The *combing efficiency* would be the ratio of the per cent noils removed in the designated fiber length groups divided by the per cent noils that should be removed in those groups.

For the fiber length distribution listed in Table II, a perfect 20% noil removal would include all the fiber in length groups 1 through 5. The combing efficiency for the two combers would be the sum below length group 7 of the actual per cent noils groups as listed in G and H divided by the sum of the per cent noils of the same groups in D,

*One of the laboratories of the Southern Utilization Research and Development Division, United States Department of Agriculture, Agricultural Research Service.

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expressing the result as a percentage. This figure would be 60% for both combers, i.e.,

$$\left\{ \frac{12 \times 100}{20} \right\} = 60$$

It can be seen, however, that the combing as represented by the fiber distribution of Column H has removed a higher percentage of the short fibers than the combing represented

by G. It is evident that it becomes necessary to weight the length groups according to their importance in being removed. Since there is no definite knowledge of the degree of importance that should be assigned to each length group, except that the shortest fibers are the most important to be removed, the weighting will have to be done arbitrarily. This can be done for the noils by using the reciprocal of the length groups numbers as seen in Column I.

By multiplying the percentage noils in Column G, below Group 7, by their respective weight numbers in I, Column $I \times G$ is obtained. The summation of this column divided by the summation of $D \times I$ for groups below 7 and multiplied by 100 would be the *weighted coming efficiency*. This formula would be

$$\frac{\sum I \times G}{\sum I \times DI} \times (100).$$

In this case it would be $100 (2.666)$

$$\frac{2.666}{(8.665)} = 30.77\%.$$

Applying the same method to Group H, a combing efficiency of 81.53% is obtained. Thus the difference that is evident in the two comber fiber length distributions can be represented by percentages which are a measurement of the combing efficiency of each.

Measurement Of Detaching Efficiency

The *detaching efficiency* can be represented by the amount of long fibers in the sliver divided by the amount that should be in the sliver, in accordance with the per cent noils being removed. For example, a perfect fiber length distribution for the sliver with 20% noils being removed from the raw stock is that of Column C. Here again, Combers 1 and 2 gave sliver fiber length distributions represented by E and F. The weights for the length groups of the sliver as listed in Column I for groups above 7 are in the same order as length groups because it is more important to return the longer fibers in *detaching*. The percentages of fibers in the groups in E and F above 7 are multiplied by their respective

Table I—Summary Of Fiber Properties Of Pima S-1 Cotton

Grade	3
Length	
Classer (in.)	1.7
Suter-Webb	
UQ (in.)	1.42
Mean (in.)	1.22
C. V. (%)	24
Fibrogaph	
UHM (in.)	1.37
Mean (in.)	1.16
UR	85
Fineness	
Suter-Webb (μg/in.)	3.2
Micronaire	3.9
Arealometer	
Specific Area (mm ² /mm ³)	486
Maturity	
Sodium Hydroxide Method (%)	84
Strength and Elongation	
Pressley Index (lb./μg.)	8.92
Stelometer	
Tenacity (g./tex)	
0 mm.	37.0
2.5 mm.	27.5
4.0 mm.	25.6
Elongation (%)	
0 mm.	
2.5 mm.	8.0
4.0 mm.	8.2

Table II—Calculation Of The Combing And Detaching Efficiency Based On A Hypothetical Fiber Distribution

A	B	C	D	E	F	G	H	I	I×G 1<4	I×H 1<7	I×E 1>7	I×F 1>7
Length Groups 1/16 Inch	Sliver Lap % Weight	Sliver Perfect 20% Noils Removed % Weight	Noils Perfect 20% % Weight	Sliver, Comber 1 % Weight	Sliver, Comber 2 % Weight	Noils, Comber 1 % Weight	Noils, Comber 2 % Weight	Number Weights				
13	10.00	10.00		10.00	10.00	0	0	13			130	130
11	20.00	20.00		16.00	18.00	4.00	2.00	11			176	198
9	30.00	30.00		29.00	27.00	1.00	3.00	9			261	243
7	20.00	20.00		17.00	17.00	3.00	3.00	7			119	119
5	10.00		10.00	0	8.00	10.00	2.00	.200	2.0	.400		
3	5.00		5.00	3.00	0	2.00	5.00	.333	.666	1.665		
1	5.00		5.00	5.00	0	0	5.00	1.00	0	5.00		
Totals	100	80	20	80	80	20	20		2.666	7.065	686	690
Combing Efficiency of Comber 1						$= \frac{\sum I \times G}{\sum I \times D} \times 100 = \frac{100 (2.666)}{8.665} = 30.77\%$						
Combing Efficiency of Comber 2						$= \frac{\sum I \times H}{\sum I \times D} \times 100 = \frac{7.065}{8.665} = 81.53\%$						
Detaching Efficiency of Comber 1						$= \frac{\sum I \times E}{\sum I \times C} \times (100) = \frac{686}{760} = 90.26\%$						
Detaching Efficiency of Comber 2						$= \frac{\sum I \times F}{\sum I \times C} \times (100) = \frac{690}{760} = 90.78\%$						

weights and listed in column I \times E and I \times F. By the same method as listed for the noils, the *weighted detaching efficiency* is 90.26 and 90.78% for Combers 1 and 2, respectively.

Practical Application

Having presented the theory by hypothetical case, it now remains to be seen how the efficiency calculation method works in practice. A Pima S-1 cotton with the fiber length distribution of the lap listed in Column B, Table III was combed with a 15.0% noil removal. The resulting fiber length distribution of the comber sliver is listed in Column E, and is expressed as percentage of lap. The noil percentages are obtained by subtracting the percentages in the comber sliver groups from those in the sliver lap groups (B-E). These percentages are listed in Column F for Groups 1 through 13. A perfect 15% noil removal would separate the sliver into the groups listed in C and the noils into the groups listed in D. The groups for sliver and noils are weighted by the weight numbers as listed in G. The actual sliver and noil percentages are multiplied by their respective weights and the products are listed in Columns E \times G and F \times G. The combing and detaching efficiencies calculated as outlined in the hypothetical case are found to be 53.08% and 91.79%, respectively. The $\frac{1}{16}$ -inch length group of Column B had to be separated into two parts (as seen in C and D) to obtain a perfect 15.00% noil removal. Correspondingly, the $\frac{1}{16}$ -inch length group in Column E was separated in the same proportion as that of Column B—the upper half corresponding to the part in Column C and the lower half corresponding to the part in Column D. The lower half of this length group was then subtracted from the corresponding length group in Column D to give the correct noils in Column F.

Cautions To Observe

One of the more serious drawbacks to measuring combing efficiency is the operator error incurred in making the Suter Webb array. The error appears to be just as predominant in one length as another. However, the operator error will affect the measurement of combing efficiency the greatest when a small amount of noils is removed. This is due to the fact that the error in one group does not have the same chance of being counterbalanced by the error in another group as is true when a larger amount of noils are removed.

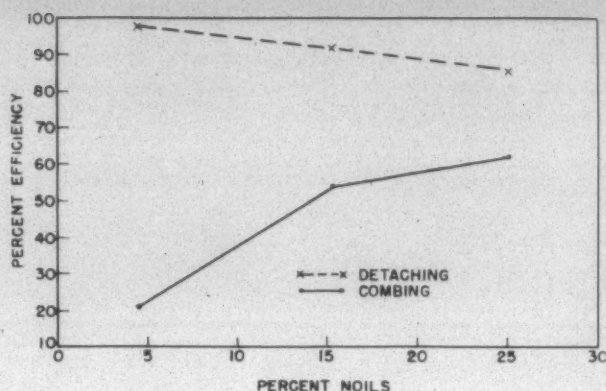


Fig. 1—Effect of the per cent noil removal on the combing and detaching efficiencies.

An example showing the effect of operator error is as follows: With the Pima S-1 cotton, 4.55% noils removed, using the comber lap and comber sliver arrays of one operator the combing efficiency was 21.00% while using the arrays of another operator it was 47.87%. With 25% noils removed the respective efficiencies for the two operators were 62.08% and 63.11%. The only suggested remedy for this is to establish operator error limits and take the required number of samples so that it will be known if differences in combing efficiency are outside these limits.

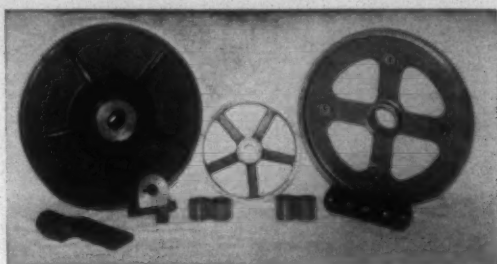
Another caution to observe is that the combing operation somewhat straightens the fibers, thereby the same fiber will be longer in the comber sliver than in the comber lap. This will give some trouble in the longer length groups when subtracting the per cent sliver from the per cent lap. However, it should not affect the combing efficiency by the proposed method, as the shorter length groups are the ones involved.

Effect Of Varying Noil Percentages On The Combing And Detaching Efficiencies

In order to determine the effect of varying noil percentages on the combing and detaching efficiencies, the Pima S-1 cotton was combed with 4.5, 15.3 and 25.0% noils removed. The combing and detaching efficiencies for the three different noil removals were plotted against the per cent noil removal as seen in Fig. 1. The combing efficiency increases as the per cent noils removed is increased. This is

Table III—Application Of The Combing And Detaching Efficiency Method To Pima S-1 Cotton With A 15% Noil Removal

A	B	C	D	E	F	G	E \times G G ≥ 13	F \times G G ≥ 13
Length Groups	Sliver Lap	Sliver Perfect 15% Noils	Noils Perfect 15%	Sliver 15% Noils (Actual)	Noils 15% Noils (Actual)	Weight Numbers		
1/16 Inch	% Weight	% Weight	% Weight	% Weight	% Weight			
25	8.93	8.93		10.07		25	251.75	
23	16.29	16.29		14.99		23	344.77	
21	20.21	20.21		18.69		21	392.49	
19	18.50	18.50		15.90		19	302.10	
17	11.88	11.88		9.50		17	161.50	
15	7.73	7.73		6.77		15	101.55	
13	4.78	1.45	3.33	1.23		13	15.99	
				2.82	.51	.077		.039
11	3.81		3.81	2.30	1.51	.091		.137
9	2.27		2.27	1.28	.99	.111		.110
7	2.11		2.11	.85	1.26	.143		.180
5	1.61		1.61	.59	1.02	.200		.204
3	1.00		1.00	.42	.58	.333		.193
1	.87		.87	.31	.56	1.000		.560
Totals	99.99	84.99	15.00	84.94			1570.15	1.423
Combing Efficiency = $\frac{\sum F \times G}{\sum D \times G} \times 100 = \frac{1.423}{2.681} \times 100 = 53.08$								
Detaching Efficiency = $\frac{\sum E \times G}{\sum C \times G} \times 100 = \frac{1570.15}{1710.59} \times 100 = 91.79\%$								



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logical, for on a percentage basis, the comber has a better chance to remove the short fiber groups. This fact is also recognized in another study.³

By the same reasoning, the detaching rolls, on a percentage basis, should have less chance of obtaining the long fibers as the noils are increased. The above findings are important because they show that when measuring the combing efficiency of different combers for comparative purposes, it is significant that the per cent noils removed should be the same.

Summary And Conclusion

A method of measuring combing and detaching efficiencies is outlined and represents an improvement over existing methods. The combing and detaching efficiencies are based on the idea of dividing the percentage of noil fibers and sliver fibers in certain length groups by the percentage of fibers that should be in these length groups for perfect combing then weighting according to length group and expressing the resultant as a percentage.

It is found that the combing and detaching efficiencies vary with the per cent noils removed by the comber. The The combing efficiency increases with increased noil removal, and the detaching efficiency decreases. When comparing the efficiency of combers, or combing methods care must be used in ascertaining that the percentage noils removed are the same and that any noted difference in the calculated efficiencies is not attributable to operator error in making the arrays.

Acknowledgment

The authors wish to express their appreciation to Dorothy C. Legendre and Annie B. Cooper for making the fiber tests, and to Arsema T. Callagan, Cleveland J. Bouquet and Sterling J. Raffray of the Cotton Mechanical Laboratory for processing the cottons for this work. Acknowledgment is also made of the assistance rendered by Charles L. Sens and John J. Brown of the Cotton Mechanical Laboratory for furnishing part of the experimental data.

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Textile Machinery Shipments Up In Value In 1958 Over 1954

The Bureau of Census reports that during 1958 manufacturers of textile machinery shipped products valued at \$375 million, an increase of 8% over 1954. Average employment in the industry showed a decrease of 7% from 1954 to 1958 to a total of 34,200 employees in 1958. Value added by manufacture in the industry amounted to \$213 million in 1958, a decrease of 2% from 1954 when the previous census was taken.

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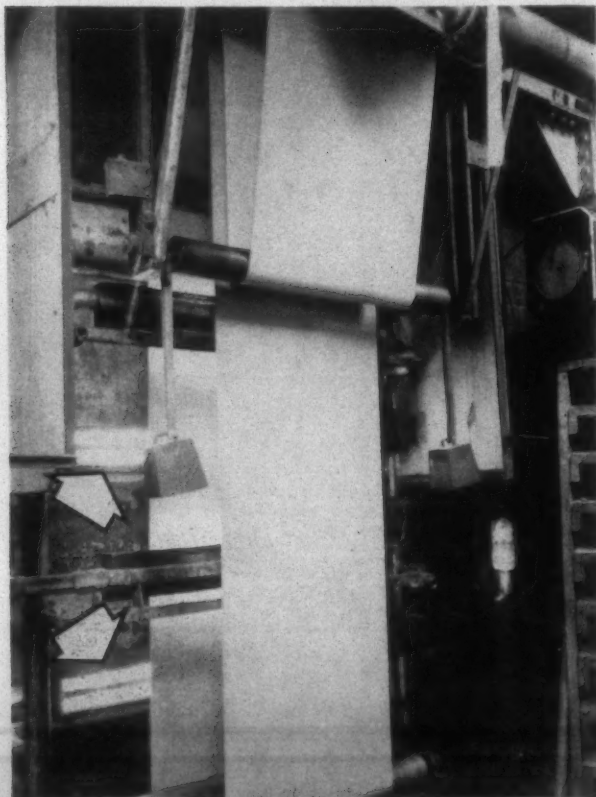
Eagle & Phenix—A Modern Historic Mill

BURNED TO THE GROUND IN 1864 BY UNION FORCES
EAGLE REBUILT AND IS NOW A MODERN DIVISION
OF REEVES BROTHERS—FINISHING VARIOUS FABRICS

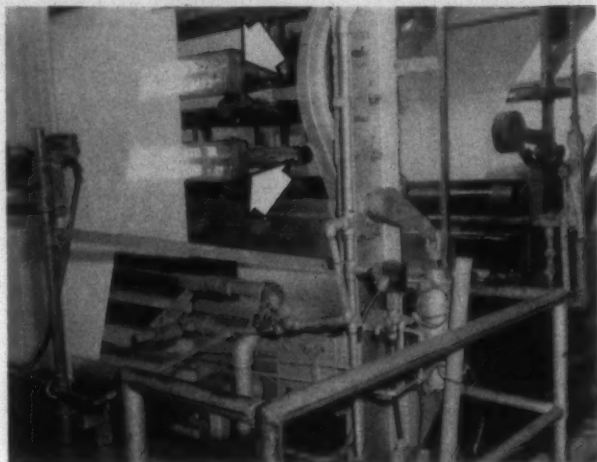
OVER 50 years ago in a booklet it published, 500,000 copies in first edition, the Eagle & Phenix Mills of Columbus, Ga., described itself as being, "like a city in themselves, these historic mills stand proudly upon the banks of the rolling Chattahoochee (River), in the very heart of the famous Chattahoochee Valley, where the giant waters come tumbling down from the highlands.

"The great stone dam marks a notable spot; for there the river affords prodigal water power, and within a stone's throw below, the steamboats come from the Gulf of Mexico to carry our goods to the four corners of the earth. Far and wide, in the fertile fields, and right up to the very gates of Columbus, the celebrated Chattahoochee Valley cotton grows and whitens under the smiling sun; while the majestic mills, by the mighty river, spin that superb staple into the many beautiful fabrics which have long been the standard of quality throughout the land."

Even 50 years ago, however, these writers and operators were Johnny-come-latelys. The *Industrial Record*, a manufacturer's journal published in New York City on June 1, 1874, carried a front page story on the Eagle & Phenix Mills. The capital stock of the mill was reported at \$1,250,000 with a surplus fund of \$300,000. The plant was



Radiant gas-fired pre-dryers (arrows) are used on the Vivatex range after mineral color has been padded on the goods.



Singeing and desizing are done in a single operation using radiant gas-fired singers (arrows) and a padded enzyme. The unit runs about 130 yards per minute.

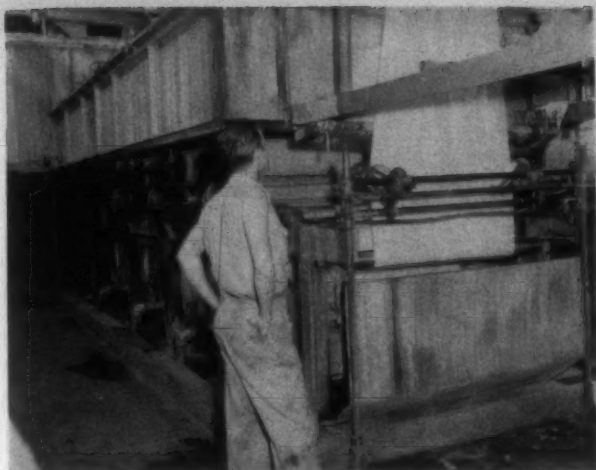
engaged in cotton and woolen spinning, weaving and finishing. Finishing equipment included 41 indigo vats and 11 bleaching vats along with "the proper proportion of washing, squeezing, drying and calendering machinery." Employment was given at 870 persons not including office and sales personnel. The monthly payroll was \$19,000 and the total sales for 1873 amounted to \$1,500,000. The company is reported to have controlled a 45,000-square-foot cotton warehouse containing some 2,800 bales of the "superb Chattahoochee Valley cotton."

A lesson in diversification can be learned by present day mills from the 1874 listing of Eagle & Phenix products: in white goods—sheetings, shirtings, osnaburgs, drills, knitting cotton diaper, canton flannel, sewing thread and towels, which are sold both bleached and unbleached; in colored goods—checks, stripes, gingham, negro plaids, awning cloths, demings, cottonades, pant checks, tickings, etc. A large amount of rope, wrapping twine and baled yarn was also made by the company.

One of Eagle & Phenix's specialties, according to the *Industrial Record*, was "their celebrated cotton blankets, of which this company is the sole manufacturers in the country, and there is a separate department devoted to that branch. They are the most beautiful blankets made and the prices being about half as much as is charged for those made of wool, the demand for them is great. They are particularly adapted for beds in elegant apartments and parlor bedrooms."

The mill was then equipped with 20,000 spindles for cotton spinning. It also had seven sets of 48-inch cards on wool. The cards supplied 2,600 self-acting mule spindles. Cotton and woolen piece goods were run on 650 looms.

Even in 1874 the Eagle & Phenix Mills had a history of over 20 years. It had—turned out fabrics for uniforms for



Goods are run through these washer boxes after coming out of the peroxide J-box on the Eagle & Phenix continuous bleaching range. Fabrics such as Bedford and other cotton cords are bleached at about 80 to 100 yards per minute. Corduroy or Cricket T (base-ball uniform fabric) are bleached at approximately 70 yards per minute.

hundreds of thousands of the "Boys in Gray,"—been burned to the ground in 1865 by the yankee General Wilson after he had fought and won an engagement with the Confederates known as the Battle of Columbus, and had risen again from its own ashes "like the fabled phenix of ancient days." The word Phenix was added to the original name, The Eagle Mills, after the plant was re-built.

An idea of how long it has been since the *Industrial Record* story was published is seen from the journal's advertisers. In addition to various steam engines, cotton mill fire buckets, and coupling, hanger and shafting manufacturers there were famous names such as: (1) Geo. Crompton making 4x4 box looms at Crompton Loom Works, Worcester, Mass.; (2) James Hunter of North Adams, Mass., was pushing "Hunter's Improved French Rotary Fulling Mill"; (3) Woonsocket Machine Co. of Woonsocket, R. I., made "Paul's Patent Selt-Acting Woolen Mules"; (4) James Butterworth & Son of Philadelphia, Pa., was the manufacturer of rag and hard waste pickers, dusters, lumpers, cotton and wool willows, etc; (5) Geo. F. Blake Mfg. Co. of New York City and Boston had more than 7,000 "Blake Patent Steam Pumps" in use in over



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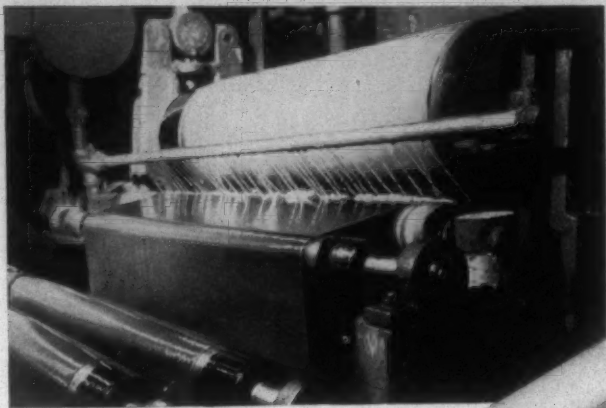
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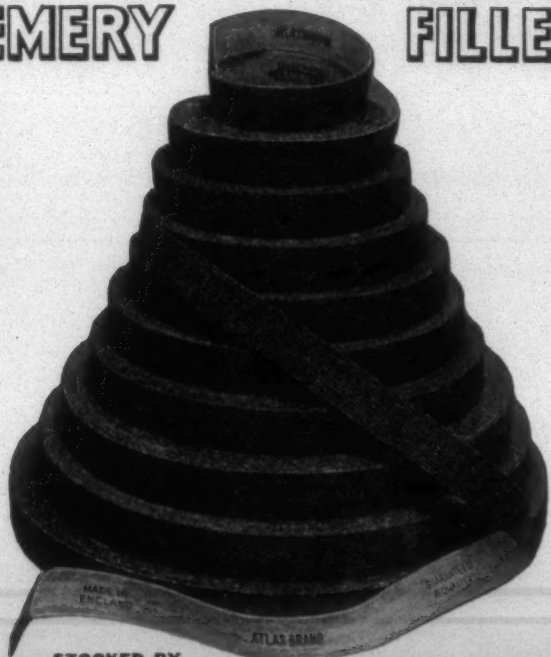
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2,000 mills and factories; (6) Curtis & Marble of Worcester, made water wheel regulators, flock and rag dusters, renovators, gig slats, in addition to its cloth finishing machinery such as shearing machines for broad and narrow cloth, carpets, etc.; (7) L. J. Knowles & Brother Loom Works of Worcester was bringing out its new broad fancy loom saying, "Every motion of this loom is *positive*, and cannot make a mispick, either on the harness motion or drop box, and can be run at great speed."

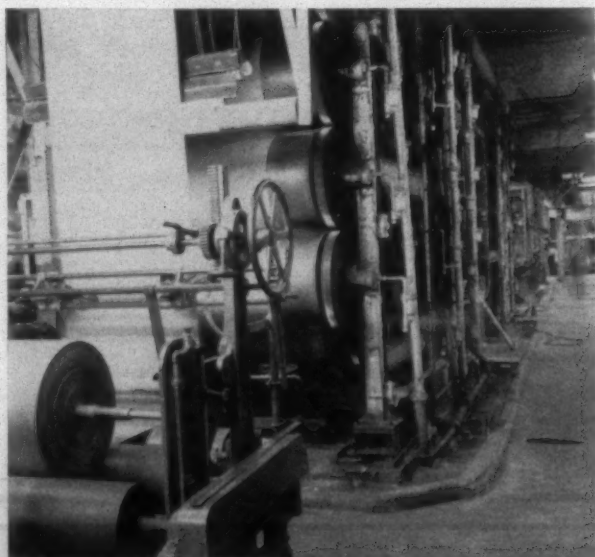
Keeping Modern

It is possible that a mill's finishing department with such long history might conceivably become stagnated and sort of dwell in the past. Not so with the Eagle & Phenix finishing division. Recently completed steps or near future plans for keeping the plant modern include:

- (1) rearrangement of preparation department with de-sizing, scouring and bleaching converted to continuous operation;
- (2) addition of a 70-inch dye range;
- (3) construction of a new drug storage and mixing room;
- (4) addition of latest type radiant gas-fired singers and pre-dryers at various positions on various ranges;
- (5) addition of 20 of the newer models of corduroy cutting equipment;
- (6) conversion of corduroy brushing and finishing to a single continuous operation;
- (7) realignment of Sanforizers and other equipment to improve material flow.

In the recent modernization program the company has spent approximately \$400,000 tandemizing equipment, adding high pressure drying cans, improving material flow and reducing handling. All finishing is done open width at present. The next finishing division department to be modernized by Eagle & Phenix is the finished goods inspection and put-up department. The shipping procedure will also be affected by the planned modernization.

Current production, as has been true throughout the mill's history, is diversified and includes poplin, sheeting, Cricket T cloth (for baseball uniforms), Bedford, Eagle



The Vivatex finishing range combines mineral color dyeing, wax waterproofing and mildew resistant treating in one operation. The goods go into the awning and boat cover trades.



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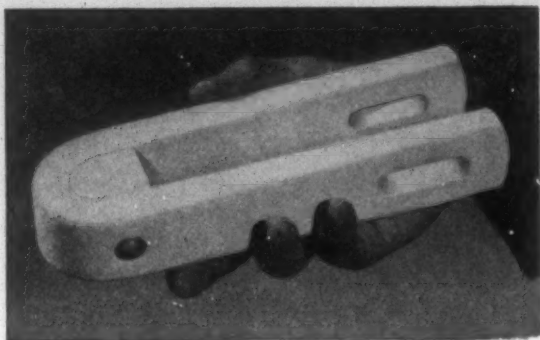


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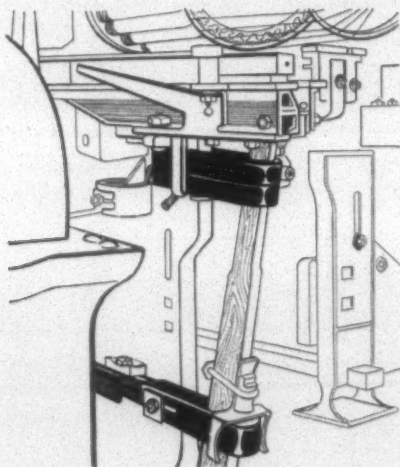
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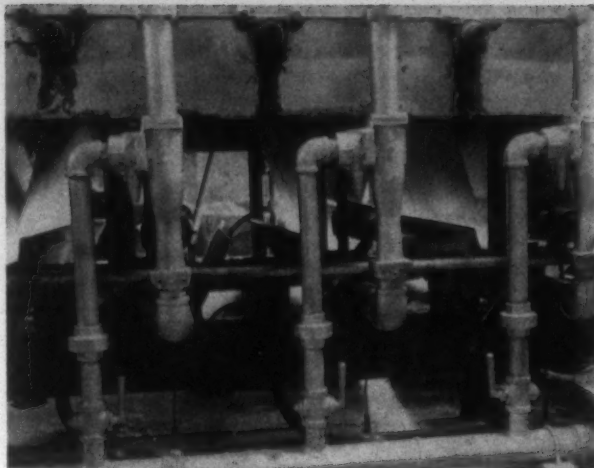
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After cutting and brushing, corduroy is singed with gas flames to bring the pile to a uniform height. The brushing, framing and singeing operations are performed continuously.

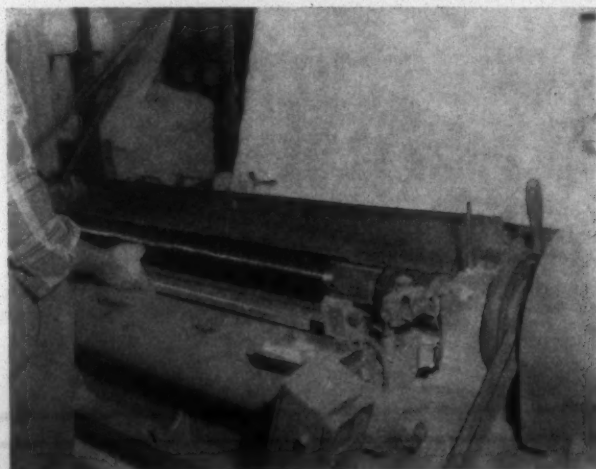
and other cords, corduroy, twills, sateens, checks and plaids, and Vivatex (for the awning and boat cover trades).

Types of finishes applied include:

- (1) resin treatment for crease resistance;
- (2) water repellant finishes such as (a) Zelan, (b) wax application to Vivatex, and (c) silicone finish;
- (3) finishes consisting of combinations of (1) and (2);
- (4) regular light and heavy starch finishes;
- (5) bleach-mercerize-Sanforize;
- (6) piece and continuous dyeing using vat, sulfur, indigosol, procion, and naphthol colors;
- (7) mineral dyeing, for exceptionally good light fastness for Vivatex and wax-proofing and mildew resistant treating in one operation.

Currently the finishing division's physical equipment includes a desizer and singer, a mercerizing range, a ten-beam boil-off machine, a steamer range, a continuous bleachery with two new wash boxes, three Sanforizers, two dye ranges, one with two stainless steel Williams units for padding and reducing vat colors, one Vivatex dyeing and finishing range, three finishing ranges, six dye jiggs, and a continuous cutting and finishing range for corduroy.

Current production of the division on 120-hour week is approximately 750,000 to 800,000 yards.



Corduroy cutting machines at Eagle & Phenix were built by J. A. Firsching & Son and run at 8¼ to 11¼ yards per minute. The fabric makes two passes through the machine with alternate wales being cut.

Satisfying Retailer Quality Standards

ONE OF THE IMPORTANT TOPICS DISCUSSED
AT A RECENT A.S.Q.C. TEXTILE DIVISION MEETING
WAS THAT OF MILL-RETAILER RELATIONS

IMPORTANT features of the tenth annual conference of the Textile Division of the American Society for Quality Control, held in Clemson, S. C., February 18-19, were talks and a panel discussion of vendor-vendee relations. Representatives of retail trade, garment manufacturers and the automotive trade made up the group of speakers.

Robert W. Peach, manager of the quality control department, Sears, Roebuck & Co., in a paper titled, "What Sears Expects from its Vendors in Quality Control," recalled that most retailers recognize that all products they sell must have high quality. Repeat sales from satisfied customers result in expanding markets as these customers tell others of their own satisfaction. Because most products sold by Sears have a brand name exclusive with the company, customers make Sears responsible for product quality. For this reason, Sears is particularly interested in assuring that its merchandise is of high quality. Of necessity, Sears must assure itself that its suppliers have adequate control of quality.

While it does not attempt to act as a quality control consultant for its suppliers, Sears can and does take simple steps to help the supplier improve its quality. By doing so Sears is able to proceed beyond the point of merely performing receiving inspection in its stores and reporting its findings to suppliers.

While the value of acceptance inspection is recognized, a better method of quality control is inspection in the supplier's plant. Sears does not undertake to send inspectors to all its suppliers' plants but does establish standards of acceptance which help the suppliers determine a practical amount of inspection for their own plants. The standards also aid in the method of selecting and recording sampling inspection information.

Receiving Inspection

Peach said Sears finds a portion of its own receiving inspection activity can be replaced with a sampling inspection at the supplier's factory, in cases where the supplier can demonstrate that his merchandise is of consistently high quality. Sears asks to receive copies of the quality reports prepared by the supplier so that it is able to compare factory inspection findings with its own inspection reports. This is not a vendor certification plan of the typical sort since Sears does not receive a shipment-by-shipment verification.

The report Sears receives, Peach pointed out, is expected to reflect product quality at the time of manufacture, not at the time of shipment. This is necessary both because Sears has over 700 receiving locations (which would be difficult to co-ordinate in a vendor certification plan) and because re-inspection immediately after production is more sensitive to quality than inspection at time of shipment.

Typically, Sears buys by specification. In many lines, Sears

makes its own patterns, sets size specification requirements and specifies fabrics to be used. However, Sears is not able to maintain high standards of acceptance on workmanship detail just through written specifications. It communicates with the factory through sampling inspections. Sears prefers to establish permanent, long range relationships with the suppliers from which it buys. Through these continuing relationships, suppliers develop an understanding of the quality requirements of Sears' merchandise. Sears expects its inspection findings to verify factory inspection findings, and this generally is the case.

"A Garment Manufacturer Looks at Vendor-Vendee Quality Control Programs" was the title of a discussion by Norman A. Shane Jr. of Shane Mfg. Co. He reported that his company has been producing men's blue denim work clothing for Sears, Roebuck for a number of years and for the past five years under the requirements of the Sears' quality control department.

In organizing the quality control program, three main product lines (out of a total of 14 styles on men's dungarees) were selected to be inspected, Shane pointed out. A great deal of time was spent with Sears' engineers to properly define and agree upon the detailed specifications and standards in measurements, material quality, workmanship and other items of importance. Shane reported the specifications were based upon the quality level that would satisfy a Sears customer and provide good service from the garment. These standards were set initially and maintained by the Sears buying department and are the same standards used by Shane's production and inspection departments as well as the statistical quality control inspector.

Questionable Defects

It is natural that questionable defects had to be referred to the buyer from time to time for evaluation to add to the file of standards in use. Such a thorough joint review of established and new standards has many values in the vendor-vendee relationship.

When the program was first introduced into the Shane plant a statistical quality control inspector was selected. This inspector is a person of above average intelligence, of potential supervisory caliber and one who has the courage of her convictions. An inspection table and other equipment needed by the S.Q.C. inspector was set-up in a separate room into which work could flow after being completed by the plant's final inspectors. There was no change made in existing quality standards. There were changes, however, in adherence to these standards.

Shane said his company found that the introduction of statistical quality control caused a slight temporary drop in efficiency and in operator's earnings. However, this gradually increased from a low point during the second and

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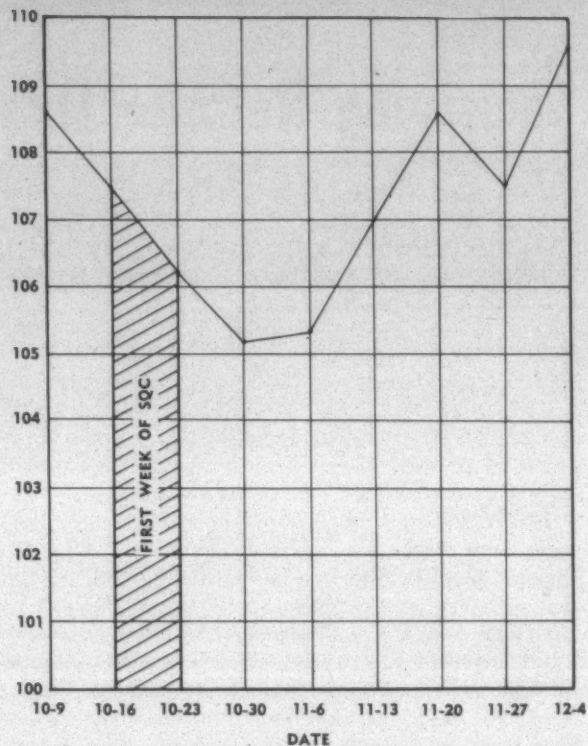


Fig. 1—The per cent of standard production during the introduction of the Vendor-Vendee statistical quality control program.

third weeks (see Fig. 1) to a new high point in the seventh week after starting the program. Efficiency and earnings increased to even higher levels shortly thereafter, providing even lower costs. This increase also demonstrates the previously proved but difficult to believe conclusion that garments can be properly stitched in no more time, and at no more cost, than if they are not sewed correctly.

Information Flow

As the S.Q.C. program matured it provided an interesting and valuable flow of information for use by both the vendor and vendee. A specific example of this type of information, according to Shane, is the comparison of the per cent of defective garments in each category (see Fig. 2) during the first three months of the S.Q.C. program, at the end of the first 1½ years, and in the most recent three months.

As the bar chart in Fig. 2 shows, the percentage of defective dungarees dropped from 16.7 to 7.0 to 3.6%. Defective overalls dropped from 20.7 to 6.1 to 4.1%; and defective jackets were reduced from 17.2 to 7.1 to 4.2%. This is truly an increase in quality—and a definitely measured one, Shane pointed out.

As for the cost of the S.Q.C. program, the only continuing direct expenditure involved is the wage payment to the S.Q.C. inspector. In addition to inspecting garments, the S.Q.C. inspector makes all calculations involved in the record keeping of the program. Shane thinks the S.Q.C. program saves far more than it costs. The constant, thorough and statistically accurate S.Q.C. inspection are true reasons for far greater security and better sleep at night for both buyers and plant executives, Shane added.

In concluding his remarks, Shane listed the following results observed after five years of S.Q.C.

(1) A marked, measurable and continuing improvement

in the quality of all products, and of adherence to quality standards by all personnel, accomplished without resistance to the program by any employees.

(2) A quick, easily interpreted check on weekly quality, and trends over periods of time, available to plant management and buying executives.

(3) A detailed daily report on the constantly changing defects occurring. This enables immediately referral to production supervisors for corrective instruction of cutting and stitching operators, and to inspection supervision, for special emphasis upon the faulty areas.

(4) A comprehensive report, daily and weekly, on the effectiveness of each final inspector on each type of garment, and of the types and quantities of defects overlooked in each case.

(5) An improved and clearer continuing definition of quality standards between buying department and plant management.

(6) Constant quality reports on garments being stock-piled during slack seasons to insure that quality standards are maintained.

(7) Reduction of the number of returned garments, dissatisfied customers, accompanying correspondence, loss of sales and loss of buyers' confidence.

A paper titled "Ford's Quality Certification Program for Textile Vendors" was presented by C. W. Eagle of the trim materials department of the Ford Division of Ford Motor Co. Eagle said since a functional, color-keyed interior has become a necessity in the modern car, quality control of these materials has become of primary importance. Over-all quality standards for automotive fabrics have been raised by the development of advanced dyeing techniques, finishing meth-

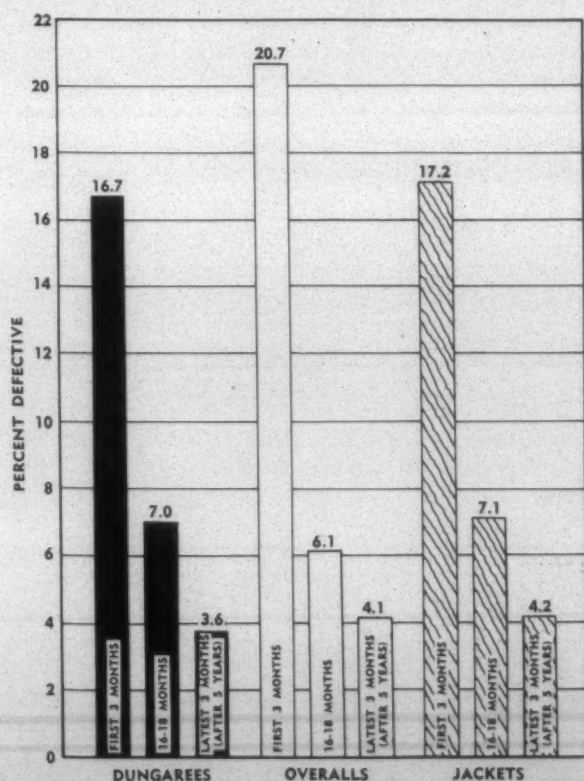
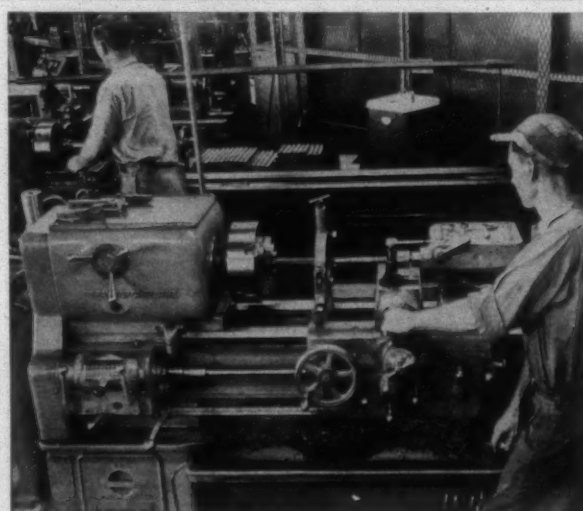


Fig. 2—A comparison (by garment categories) of the per cent of defective garments as the statistical quality program progressed.



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ods and constant improvement in physical characteristics, and the adoption of more precise fabric specifications.

Specialization Evident

As specialization is becoming more evident in our daily society, Eagle said, so it is necessary to specialize organizational functions at Ford for increased efficiency. Three separate and distinct areas of management—quality control, production control and purchasing—are directly concerned with administering quality control at the operating level.

The primary functions of quality control at Ford are: (1) inspection and reporting of product quality at all stages of the production process; (2) that approvals must fully meet all established specifications and, increase of trim products, conform to the appearance of the approved master sample; (3) that "conditional approval" for slight deviation from specifications is no longer valid; (4) that manufacturing must not deviate from specifications for any reason; and (5) that only the responsible product engineering activity, through the assigned resident engineer, has the authority to approve deviations authorizing the use of products which do not meet specifications.

Eagle outlined the roll of purchasing in quality control as: (1) selection of capable and qualified suppliers; (2) obtaining assistance of appropriate engineering or quality control activity to assist suppliers; (3) taking aggressive action to obtain correction of initial sample rejections, as well as rejections of later shipments; and (4) assisting textile engineering in obtaining valid qualifying test specifications.

Production control's role in quality control is seen when: (1) production is jeopardized by notification from quality control of rejected shipments as these shipments must be immediately replaced (in co-ordination with purchasing); (2) production is not affected, rejected shipments are returned; and (3) defective lots require sorting at in-process or final inspection.

Vendor Quality Certification

The Supplier Quality Certification Program was inaugurated as a means of stimulating Ford's suppliers to furnish material of a consistently acceptable quality level. While the majority of the suppliers have shipped material that met specification tolerances, Ford found evidence that a significant number did not consistently ship within acceptable limits. The basic concept of the program was derived from the situation of incomplete inspection coverage. As a fundamental premise the program stated the responsibility for preventing defective material shipments was clearly the supplier's.

To implement this program, Ford textile suppliers were requested at the start of 1960 shipments to commit to furnish consistent and high standards of material. These commitments go beyond a pledge that all materials conform to Ford specifications by taking the form of a Quality Certification Program.

The following method is currently being employed by all textile suppliers participating in the Ford Quality Level Certification Program.

(1) Initial production lots are fully certified and copies of test results are listed on a prescribed format for uni-

(Continued on Page 134)

The Loomfixer And His Job

Part Eighteen

THE EFFICIENCY OF THE WARP STOP MOTION HAS MUCH TO DO WITH CLOTH QUALITY AND QUANTITY

By WILMER WESTBROOK

THE sliding bar warp stop motion is a simple mechanism that will perform efficiently if it is properly set up and maintained. This stop motion will cause the loom to stop—with the lay in center position and the shuttle in the box—when a warp end breaks or becomes excessively slack.

The toothed bars grip the fallen drop wire and move it to form a split in the warp sheet so that the broken end can be quickly located.

With the warp shed fully open and the warp under normal tension, adjust the height of the stop motion so there will be $\frac{1}{8}$ " clearance between the slot in the drop wire and the bottom of the feeler bar holder. It may be necessary to tilt the stop motion slightly to get the necessary clearance on every bank of drop wires.

Have the stop motion positioned so that the drop wires bounce at every pick. Lively action of the drop wires help prevent lint from forming strands in the drop wires and warp ends and keeps the drop wires from sticking together.

Determine the best position—both vertically and horizontally—for the stop motion on a particular model loom and type fabric. Make a gauge of wood or metal and then set all stop motions alike for that particular model of loom and type of fabric.

To time the stop motion push the lay to back position with the shuttle in the right hand box. Turn the oscillator cam on the cam shaft until the timing notch is directly above the stud in the oscillator cam follower. Tighten the setscrews that hold the cam onto the cam shaft.

Adjust the oscillator rod so that the top of the rod end will be aligned with the bottom of the front warp support. Set the sliding feeler bar so that its teeth completely close the spaces between the teeth of the feeler bar holder, with the feeler bar fingers in vertical position.

Push the plunger holder upward until there is no slack between the plunger and the plunger finger. Don't have the plunger pushed back into the holder and don't have the knock-off raised.

Set the knock-off assembly so the knock-off end just clears the knock-off bunter on the lay. Make sure none of the knock-off parts bind against other loom parts such as the hand or brake wheel.

Turn the motor off, move the lay to within one inch of back position and pull the shipper handle on. Adjust the knock-off stand to have $\frac{1}{8}$ " clearance between the knock-off and the knock-off bunter.

Move the lay backward and forward by means of the hand wheel with the motor off and the shipper handle on to make sure all stop motion parts work freely without bind or friction.

Start the loom and test the stop motion by inserting a

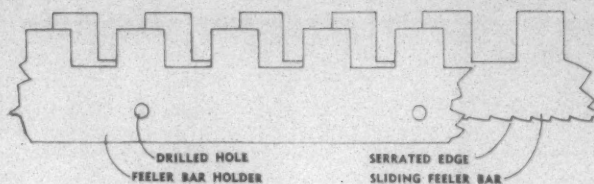


Fig. 1—Holes drilled in the feeler bar holder and serrated bottom edge of the sliding feeler bar help keep the bars free of lint and dirt.

drop wire between the teeth of the bars. Check it with the sliding feeler bar moving from left to right and then from right to left.

One of the most frequent troubles encountered with the sliding bar warp stop motion is that of having lint form under the sliding feeler bar. This lint will build up and will hold the bar so high the drop wires will ride over the feeler bar holder teeth. The loom will continue to operate with one or more broken warp ends.

The accumulated lint should be cleaned out of the feeler bar holders at every warp-out. Remove the stud in the end of the sliding feeler bar and remove the bar from the holder. Clean the lint from the slot in the holder with a dull knife or with a special tool made from a thin piece of steel as shown in the accompanying sketch. Don't use anything to clean the bar that will bend or damage the bar teeth.

Some feeler bar holders have small holes in the sides that help prevent the accumulation of lint and dirt. Holes can be easily drilled in holders that do not have them. Also, some holders have serrated bottom surfaces that keep the lint loosened and move it through the holes in the holder or toward the end of the bar.

If the warp stop motion causes the loom to stop and there is no broken or slack warp ends, check the following:

- (1) Look for bent or broken drop wires.
- (2) See if the sliding feeler bar is sticking or binding.
- (3) Check for bent teeth in the feeler bar or bar holder.
- (4) See if the knock-off bunter is loose or too low.
- (5) Check the knock-off for misalignment.
- (6) Look for matted or tangled warp ends.

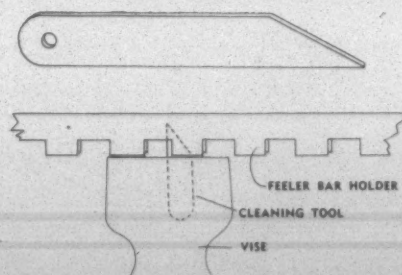
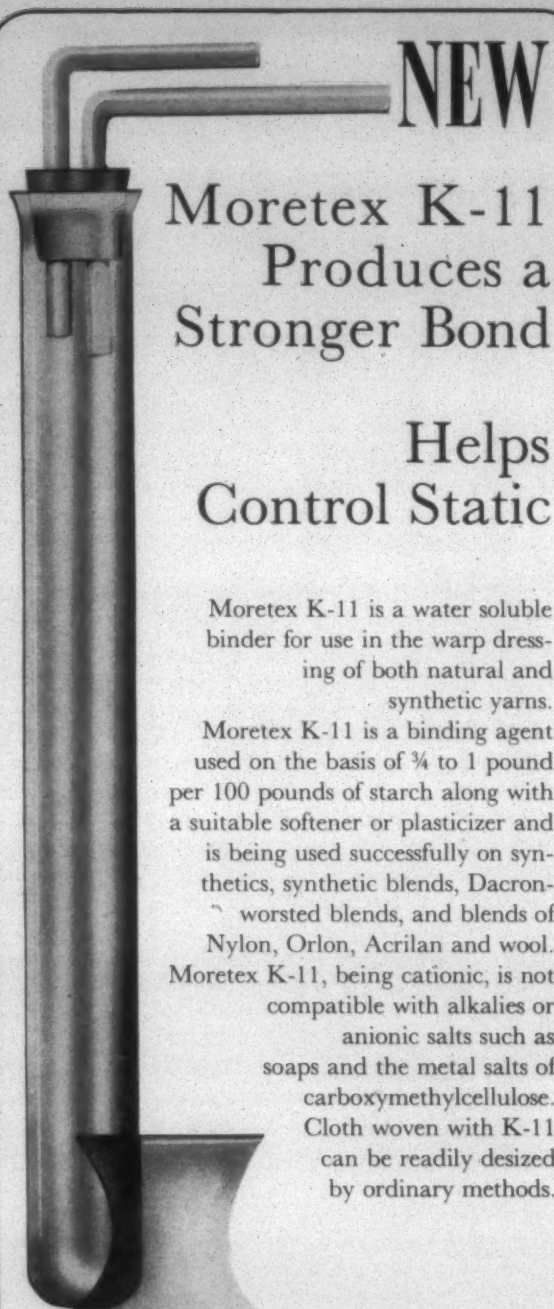


Fig. 2—A handy tool for cleaning the feeler bar holder. Made from a piece of heddle bar, a hack saw blade or other suitable flat steel, it can be held in the hand or fastened in the vise for use.



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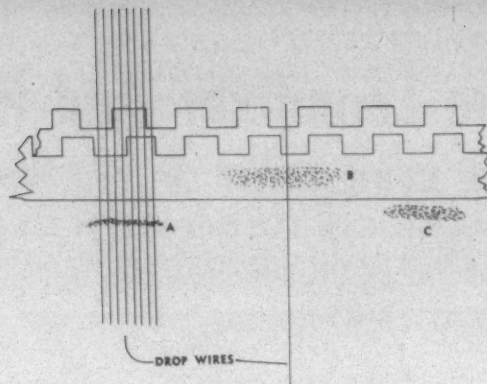


Fig. 3—Where accumulations of lint cause trouble in the sliding bar warp stop motion: (A) Strand formed in drop wire holes. (B) Lint in the holder under the sliding feeler bar. (C) Lint matted between the warp ends inside the banks of drop wires.

If the stop motion fails to cause the loom to stop when an end breaks, check these points:

- (1) See if the oscillator cam has slipped out of time.
- (2) Check all settings of stop motion assembly and knock-off.
- (3) Inspect for lint under the sliding feeler bars, lint in the form of a rope in the holes of the drop wires, or lint matted in the warp between the banks of drop wires.
- (4) Check plunger, plunger cable and plunger finger.
- (5) See that shipper handle releases freely.
- (6) See that the feeler bar fingers have no lost motion and that the finger springs are under correct tension.

At warp-out grease the oscillator cam and the cam follower. Oil the feeler fingers, finger rod bearings and the knock-off.

Jewell Heads Georgia Cotton Buyers

D. Ashley Jewell, Crystal Springs Bleachery, Chickamauga, Ga., was elected chairman of the cotton buyers division of the Georgia Textile Manufacturers Association at the association's annual meeting in Atlanta, Ga. Jewell succeeds Robert Taliaferro, Crown Cotton Mills, Dalton, Ga.

Mark E. Johnson, Fulton Cotton Mills, Atlanta, was elected vice-chairman succeeding Jewell. Frank L. Carter, Georgia Textile Manufacturers Association, was re-elected secretary.

N. C. Cotton Buyers To Meet

The Cotton Buyers and Classers Division of the North Carolina Textile Manufacturers Association will meet May 19-20 at Grove Park Inn, Asheville, according to Division Chairman H. M. Weymouth of American and Efird Mills Inc. of Mount Holly.

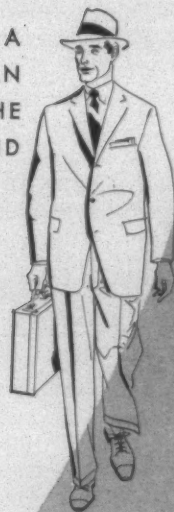
The two-day meeting will include a panel discussion of current cotton problems, an address by Congressman Basil L. Whitener of North Carolina's Eleventh District, and election of new officers. Representative Whitener will speak during the Friday morning session of the meeting.

Participants in the panel discussion, scheduled for the Thursday session, will be Roscoe Reynolds of Bibb Mfg. Co., Bacon, Ga.; W. Gordon McCabe Jr. of J. P. Stevens & Co., Greenville, S. C.; Adolph Weill of Weill Cotton Co., Montgomery, Ala.; and Hubert F. Fisher Jr. of Cook & Co., Memphis, Tenn.

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The Designing Of Pile Fabrics

By E. B. BERRY

Chapter 6

Double Faced Cut Pile

PROTECTIVE inner linings for clothing are important to both the civilian trade and to the military. Parkas must be warm, and at the same time, not too bulky or cumbersome to impair the mobility of the wearer. In the extreme cold of the arctic, as well as high altitudes, an insulating fabric is very important to the wearer.

When designing an insulating fabric, much consideration must be given to the functional properties such as form stability, resilience, compressibility, air permeability, porosity, serviceability and density, as well as the constructional properties of weave, ends and picks per inch, turns of twist and fiber length. In the ideal fabric, all these are coordinated to give "warmth without weight." This warmth is accomplished by immobilizing the air; that is, by having thousands upon thousands of tiny air pockets dispersed throughout the fabric. With so many small air cells there is a minimum of air movement. As a result, the transfer of heat from the body to the outside air is retarded.

The general concept of a pile fabric is an excellent starting point for designing a woven cloth that will resist the transfer of body heat. A cut pile fabric, made with the toy fur weave, having alpaca pile yarn was used first. This was good, but as planes went higher, encountering colder temperatures, a better insulating material was needed.

The first step to improve this condition was to nap the pile fabric on the back. The reasoning being that this would create more airpockets. In napping, some fibers are lost giving a lighter weight fabric. This is not good.

Weaving a fabric with a cut pile surface on *each* side was the answer. Joint Army-Navy Specification JAN-C-483 covers cloth, wool, alpaca and wool-and-alpaca pile. Both single and double faced fabrics are in this specification.

Weaving A Double Faced Cut Pile

Fig. 29 is the weave and drawing in draft while Fig. 29A is the cross-section showing the interlacings of a double faced cut pile fabric. In order to get the pile tufts on *both* sides of *each* piece, a false fabric is employed. The pile ends in the base pile fabric weave with the pulling picks in the false fabric. After the knife has cut the two base pile fabrics apart, the dummy fabric is removed from the base pile fabric. As this is done, the pulling picks remove one leg of the pile tufts out on the back of the base pile fabric, while the other leg remains on the side where it was woven. This produces a cut pile surface on the back as well as the face of the two base pile fabrics.

This method is rather expensive due to the false fabrics being made. It is covered under U. S. Patent No. 2,333,258.

Following is the final procedure:

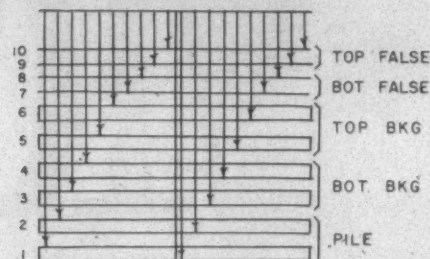
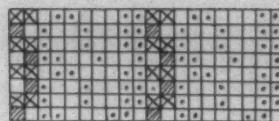


Fig. 29—The weave and drawing in draft of a double faced cut pile fabric used as an inner lining for clothing.

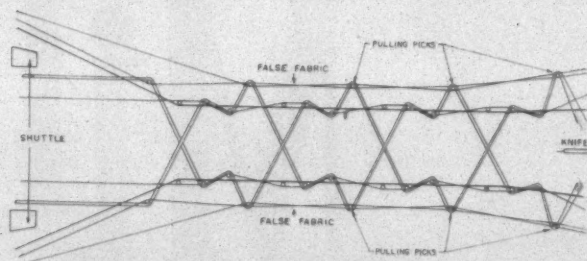


Fig. 29A—A cross section showing the interlacings of a double faced cut pile fabric.

- (1) Finish—pull dummy fabric; scour, wet-out, extract, mothproof, extract, tiger (both sides), dry, tiger (both sides), beat (both sides), shear (both sides)
- (2) Condition
- (3) Finish Inspect
- (4) Roll and Wrap
- (5) Ship

The federal specification in part states about the mothproofing—"The fabric shall have a properly applied moth-repellent treatment of silicafluoride, so that the animal fiber will have a minimum of 0.5% fluorine, and be non-irritant and non-toxic. The mothproofing agent shall contain no arsenic or other chemical which is known to produce dermatitis."

This is very important, for the fabric is worn close to the human body and is more critical than the mothproofing used on the mohair plush fabric.

A Second Method

There is another way of obtaining a double faced cut pile fabric. Fig. 30 is the weave, while Fig. 30A and Fig. 30B are cross-sections showing the interlacings. Shedding wires are used here and replace the false fabric in Fig. 29A. These shedding wires are round, approximately .035" in diameter, and are made of a good grade of flexible steel. They are secured to a bracket in the center of the

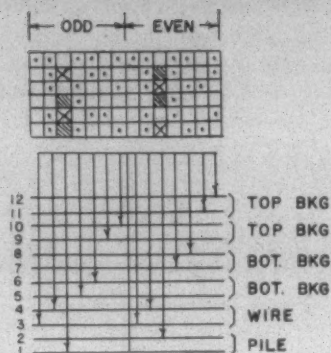


Fig. 30—An alternate means of creating a double faced cut pile fabric without making a dummy fabric.

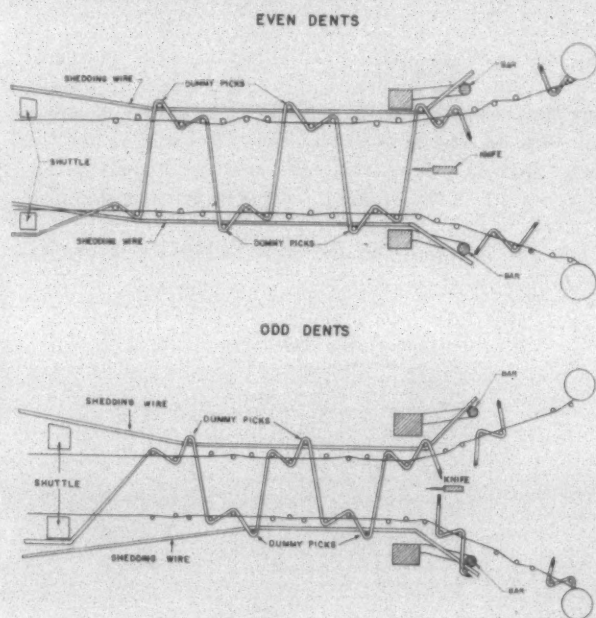


Fig. 30A & Fig. 30B—Cross sections showing the interlacings of the alternate weave.

loom (behind the harness) and are drawn through the eye of a regular heddle on a conventional harness frame. This harness will move, as does the backing and pile harness. The other end of these wires are supported by a bar, which is placed about an inch from the back of each fabric and four inches past the fell of the cloth.

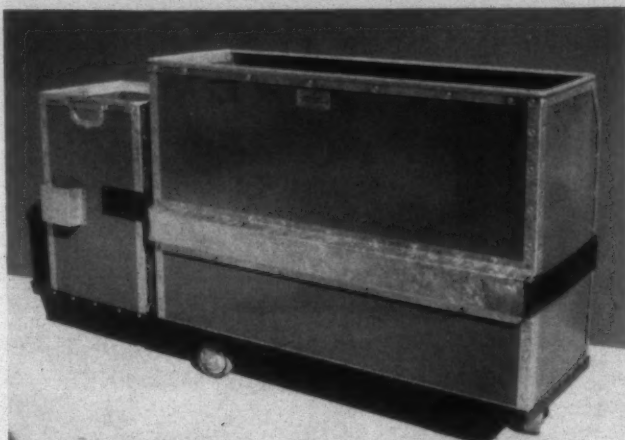
The picks that are to be dummy in the top piece will be above the shedding wires, while the picks that are to be dummy in the bottom piece will be below the shedding wires. The pile ends will be above the dummy picks in the top piece and below the dummy picks in the bottom piece.

The shedding wires are bent away from the top and bottom fabrics. As the take-up motion advances the cloth, the knife cuts the two fabrics apart. These dummy picks then ride on the shedding wires, away from the back of their respective fabrics. As this occurs, the picks pull one leg of the pile tuft out of the face and pull it to the back of its respective fabric. This principle is covered under U. S. Patent No. 2,391,835.

A unique variation of this double faced cut pile fabric is in the use of colors. Drapery fabrics may be made to hang at a door, between two rooms. A blue could be on one

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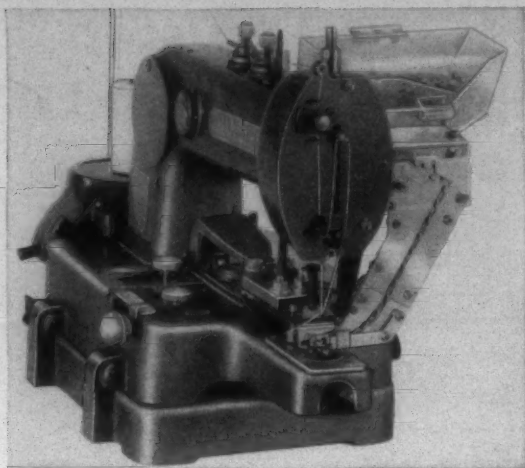
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side, to blend with one room, while a pink or white on the other side, to blend with the other room. The weave and drawing-in draft are shown in Fig. 31 while the cross-section is shown in Fig. 31A. Shedding wires are used here to remove the dummy picks and one leg of the pile tufts.

The end result here is the 6-pick toy fur weave with a different color on each side of both pieces. Such a method of weaving is always expensive, for in this case eight picks are thrown to get six in the cloth as shipped to the customer.

There is another disadvantage. The same colored yarn which makes the cut surface on the top piece, will make the pulled surface of the bottom piece. Since there is a slight difference in pile height between the cut surface and the pulled surface, both top and bottom pieces will not be exactly the same. This may cause complaints from the customer.

In order to overcome this objection, two additional dummy picks may be added. This weave and drawing-in draft are shown in Fig. 32 with the cross-section shown in Fig. 32A. In this new weave, one color will be the cut surface in both fabrics, while the other color will be the pulled surface in both fabrics. This is more expensive than the weave in Fig. 31A for four picks are lost in ten, instead of two lost in eight. The end result is the 6-pick toy fur weave.

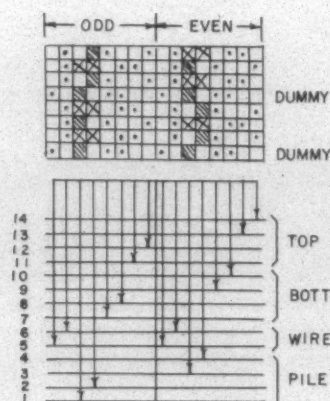


Fig. 31—The weave and drawing in draft for a double faced cut pile fabric with different colored faces.

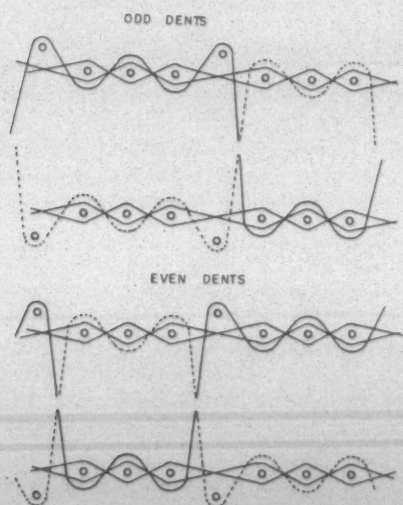


Fig. 31A—Cross section of the two-color double faced cut pile fabric.

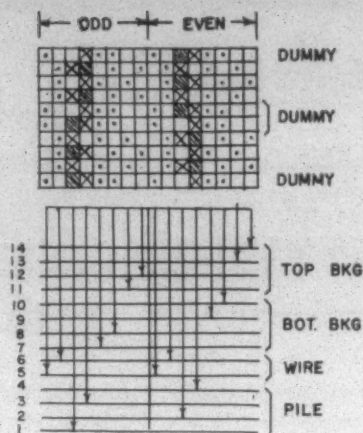


Fig. 32—Weave and drawing in draft for a two-color fabric with two additional dummy picks to provide equal pile height on both sides of the fabric.

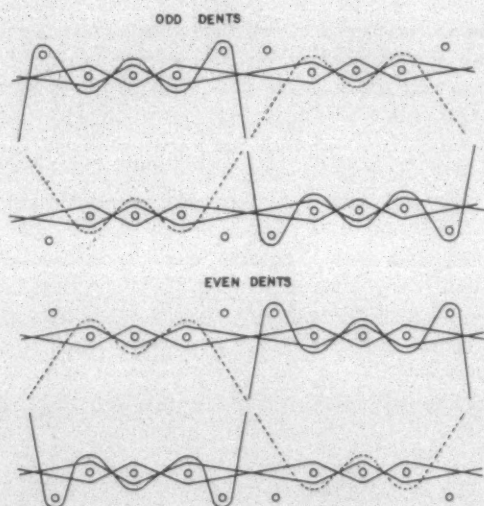


Fig. 32A—A cross section of the two-color fabric with added dummy picks.

Care must be exercised in pulling out the dummy picks because one leg, when it is pulled out, may disturb the fibers in the adjacent leg. Since these are different colors, it may be possible to get some of the wrong color fibers on the opposite side.

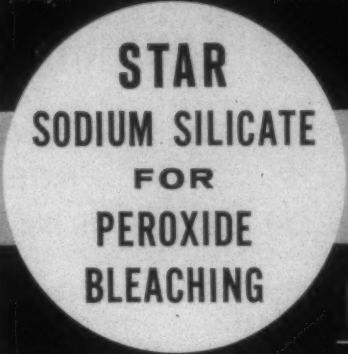
Cotton Consumption Up In March

Consumption of cotton in the U.S. in March totalled 888,320 running bales against 730,914 bales in February and 863,799 bales in March of 1959. Daily average consumption was 35,533 bales in March as compared with 36,546 bales in February and 34,552 bales in March of last year.

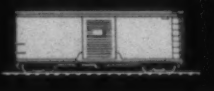
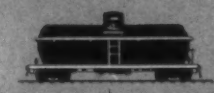

Some 10,304 bales of foreign cotton were consumed in March, an increase over both February and March of 1959, when the totals were 8,191 and 9,620 bales, respectively.

Man-made fiber consumption totalled 44,067,000 pounds in March against 38,115,000 in February and 47,486,000 pounds in March of last year.

In March some 19,969,000 cotton-system spindles were in place with 19,299,000 active. In February 20,072,000 cotton-system spindles were in place with 19,358,000 active and in March of 1958, 20,401,000 spindles were in place with 19,257,000 active.



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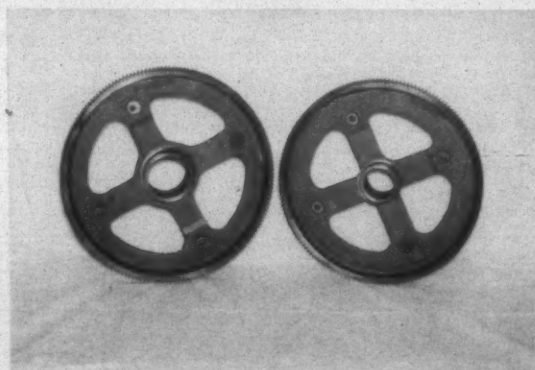
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A Review Of Spinning Improvements

THE AUTHOR DISCUSSES DEVELOPMENTS
IN SPINNING UP TO THE PRESENT TIME PLUS
SOME OF SACO-LOWELL'S NEW DEVELOPMENTS



By ROBERT M. JONES*

THERE have been many recent forecasts to the effect that the 1960s are to be years of great prosperity, barring any war of world importance. This thinking has been reflected by the seers of the textile industry, and my interpretation of their predictions is that the present enjoyable era promises to continue with only minor fluctuations. Primarily, this is based on the expected increase in population (by 1970) of approximately 25% and a corresponding increase in the use of textiles.

Is this a true appraisal?

Undoubtedly there will be some increase in wearing apparel, some increase in consumer uses and home furnishings, and considerable increase in industrial use.

According to *Textile Organon*, January 1960, the total fiber used in 1949-1950 was 5,825 million pounds and in 1957-58, 6,275 million pounds—a gain of 7¾%. "Well," you say, "1957-58 was a poor year." So, let us look at the best year in this decade—1955-56, which used 6,450 million pounds, a gain of 635 million pounds or 10.9%. Therefore, if the trend is to continue, it would seem that by 1970 the U. S. might be consuming 10 to 15% more fibers of all types for all purposes.

Naturally, as textile machinery manufacturers, we try to interpret what this will mean to us. Much of the machinery is old, a lot of it is obsolete. Will it mean a period of great expansion in the textile industry? That depends a great deal on the attitude of the spinning mills about new machinery and the condition of machinery now in their spinning mills. England has recognized that her cotton mills are largely obsolete and through a subsidy she plans to scrap two-thirds of the spindles. Of course the preponderance of the spindles are mule, and new ring spinning will produce more yarn with one-half the spindles. Here, in the U. S., things are quite different. To a considerable degree, mills already have converted to or purchased new long draft spinning, one-process roving, and similar improvements.

In general, there are five areas in which we can improve performance and reduce cost, namely:

- (1) **Reduction in process by combining or extending.**
- (2) **Increasing Package Size.**
- (3) **Increasing Speed.**
- (4) **Decreasing Maintenance.**
- (5) **Decreasing Handling.**

Reduction In Process

Starting back in the 1920s, we began to eliminate or combine processes and machines. First, in the picker room, we reduced the pickers from breaker, intermediate and finisher to one process. Then, by automatic controls we tied together all the machinery from feeders through pickers, thus eliminating any handling between bale and lap. The next big development was long draft spinning. Although

sporadic attempts had been made for many years to extend the draft in the spinning frame by the use of slip rolls, plates, arcuate arrangements of rolls, and aprons and belts, it was not until 1913 that Fernando Casablanca exhibited in the School of Technology of Sabadell, near Barcelona, Spain, a two-belt system that performed fairly well.

Casablanca worked for many years improving and perfecting his system before it became generally accepted. In the interim, a French engineer, Martin August Roth, devised a single belt system combined with a slip roll which Saco-Lowell developed and placed on the market in March 1928^a. This enabled the spinner to increase the range of draft from 6-12 up to 15-20 and eliminated one of the roving processes. The mills soon recognized this as a considerable saving (we sold over a million spindles by September 1929); and, two or three years later our major competitor offered an improved Casablanca system which had about the same range of drafts. Since that time, long draft has become standard.

At the International Textile Exposition held in Boston in the Spring of 1930,^b Saco-Lowell exhibited the first long draft roving frame. This used the Roth principle with a slip roll and was not a success; however, we pursued the idea, bringing out in 1934^c the controlled draft roving frame (Reynolds patent). This was superseded by the "J" frame in 1937^d and by the FS-2 in 1948,^e each frame with a little more control and, therefore, capacity for longer drafts. Meanwhile, the apparatus on the spinning frame had been improved so that drafts of 40 to 50 are now possible. The over-all result is that, except for very fine numbers, one-process roving is standard, instead of two and sometimes three-process as was standard a few years ago.

Large Packages

In 1952^f Saco-Lowell introduced the Gwaltney spinning frame. In my opinion, Eugene C. Gwaltney can truthfully be called the "father of large packages." Back in 1928,^g while at the Morgan Mills, he had Saco-Lowell build a spinning frame, 4½-inch gauge, three-inch ring, nine-inch traverse. This was equipped with traversing thread boards or thread guides. He also pioneered with fine hanks on large roving packages, large laps and large cans.

As compared to the 1930s, the present day laps are 50% heavier; the card, drawing and comber cans 300 to 400% heavier; and roving bobbins now contain up to 100 ounces, as compared to 26 ounces for the same hank; while the warp spinning bobbins contain two-to-three times as much yarn.

During this same time, machinery builders have been

*Vice-President in charge of research, Saco-Lowell Research & Development Center, Clemson, S. C. Delivered before the Boston Textile Club, April 2, 1960.

developing machines capable of making packages averaging triple the weight of those of 1930. In many instances they have been increasing speeds. Openers and pickers are running about the same; and no one found a way to increase substantially the production of the card and maintain quality. But when it comes to drawing, speeds have skyrocketed. Front roll speeds of 100 f.p.m. were standard in 1930. Controlled draft drawing of 1932 raised the speed to 150. We considered that fast. Today, 600 f.p.m. for carded work and 400 f.p.m. for combed are not considered excessive speeds. The old 12x6 slubber was run at a spindle speed of 600 r.p.m. and .80 hank was the finest roving listed in the catalog. The catalog speed of a 10x5 roving frame making 1 hank was 750 r.p.m. Today, we run a 13½x7 at the same speed and are going higher. But the most significant change is in spindle and traveler speeds.

Up to the advent of the Sawyer spindle, away back in the 1870s, spindles seldom ran higher than 6,000 r.p.m., no matter how small the package. This was because any out-of-balance package knocked the bearings to pieces in short order. After Rabbeth invented the so-called gravity spindle, which allowed the spindle loaded with a bobbin to find its own center of gyration, spindle speeds were increased some 50%; and with the advent of anti-friction bearings, the spindles could run up to about 12,000 r.p.m. with fair size packages and normal out-of-balance bobbins. In 1945, Saco-Lowell introduced the New Era Spindle, the first, and still the only spindle, to run on two ball bearings spaced apart with the load in between instead of having both bearings below the loaded package. This, combined with a novel dampening arrangement, permitted very high speeds. Speeds up to 20,000 r.p.m. with the heaviest spinning packages can be run on this type spindle without difficulty. At present there is no ring or traveler to go with the spindle and there are other factors involved in that limit speed. However, at Milan we exhibited an SJ frame making 30s yarn on two-inch ring at 14,000 r.p.m. (7,350 f.p.m. traveler speed), and this speed is being achieved in actual mill practice here in the U. S. On three-inch rings, we have gone to even higher traveler speeds; 10,500 r.p.m. of the spindle results in a traveler speed of over 8,000 f.p.m. Thus, the old limitation of a mile a minute on traveler speed has been raised about 50%; on lubricated large diameter rings, speeds of two miles a minute are not unusual on twistors.

Decreased Maintenance

For 30 years, every time we have designed a new machine or a new unit, such as a drafting system, we have kept uppermost in mind ways and means to decrease maintenance and maintain performance. This has been done by using anti-friction bearings instead of plain bearings, one-shot oiling systems, sintered parts, die castings, extrusions, plastic moldings, and other new materials in place of the traditional cast iron, bronze and steel. We also have enclosed drives as well as motors, built into the machines the switches and fuse boxes until there is little resemblance in use or appearance between a modern drawing or spinning frame as compared to the machine sold even ten years ago.

The modern spinning frame, with its complete anti-friction bearing construction, requires lubrication only two or three times a year, as compared to the old frame which needs to have some parts oiled once a shift. Besides reducing lubrication nearly to the vanishing point, anti-friction

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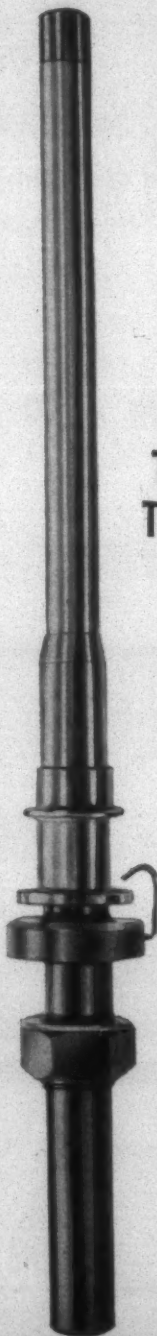
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bearings produce more uniform quality work because a ball or roller bearing either works perfectly or fails quickly. On the other hand, plain bearings wear slowly and as the worn surfaces are usually hidden, they frequently are the source of hidden defects in sliver, roving and yarn.

Perhaps the greatest asset of the modern frames, however, is that they are easy to keep clean, and cleaning is a large percentage of the labor cost. Oil, grease and dirt mix easily with fibers, particularly cotton, and it is a constant fight to keep the cotton out of the bearings and the oil out of the cotton. With the proper seals, grease lubricated rolls and spindles are quite clean and this problem is minimized. However, last year we brought out a drafting element that went even further, because it runs completely dry without any lubrication. This is the MagneDraft, where the pressure on the rolls is produced by permanent magnets instead of by weights or springs. The magnets in the top roll produce a magnetic circuit through the bottom roll, clamping both together like a "C" clamp. Therefore, there is no bearing pressure to be relieved by oil or anti-friction bearings; no load on the bottom rolls, except their own weight. The result is we can use dry bearing material, such as nylon and Delrin, and no lubrication is required, ever. Besides the savings in maintenance, the top rolls and adjacent parts remain much cleaner. Only recently I had a mill man tell me that the fly from the top rolls had not been picked for three weeks and the rolls looked as if they had been cleaned recently.

Decreasing Handling

Besides increasing the size of the package, mechanical equipment for transporting cans, bobbins, beams and other forms is growing in use. The lap handling equipment used at Borden Mills is an example. The picker-tender places the lap on a pan of a chain conveyor. The lap, carried by the conveyor, goes to a scale; if the over-all weight of the lap is correct, it proceeds to the far end of the card room; if incorrect, the pan and lap are shunted to one side to be rerun. Spare lap rods at the back of each card have been replaced by another curved pan suspended on springs; the laps carried by the chain conveyor are intercepted by the raised lap pan on the back of the card and the lap deposited in the pan. The weight of the lap depresses the pan and allows the other laps carried by the chain conveyor to pass on to the next card. When the spare lap is taken from the card lap pan, the latter raises up to intercept another lap when it passes by. In this manner, there is no trucking or handling of the laps from the picker to the cards. There still is the manual operation of placing the lap on the chain carrier and splicing the lap through the feed roll of the card.

Other means, perhaps more efficient, are being worked on. Pneumatic methods of collecting and conveying waste are in common use, both in the card and spinning room. Eventually, perhaps pneumatic conveying will be used for process fibers as well as waste outside the picker room.

What Does It All Mean?

What does all this combination of reduced process, large package, high speed, decreased maintenance, and decreased handling mean to the mill of today?

In 1948, according to figures compiled by the American Federal Reserve Board, the number of people employed in

textiles was 1,368,000. In 1959, the number was 983,000; 385,000 or 28% less; and these 983,000 people turned out 14% more goods than the 1,368,000.

In some areas, the advance is even more startling. The latest figures on broadcloth production show that a mill equipped with the present modern machinery requires only 29 operatives per shift, compared with 70 on the machinery supplied in 1950.

The reason for all this improvement in over-all efficiency, as outlined before, is not due to any one factor but many factors. Besides reduced process, larger packages and higher speeds, the machines themselves have been vastly improved. They are more reliable; they require less maintenance; they are easier to keep clean. Mechanical handling and cleaning apparatus has been added and the mills operate this apparatus more efficiently.

This is a serious drawback from the textile machinery manufacturers' point of view. Every time we make a significant improvement, we cut down our market for sales. For example, we now sell only one delivery of drawing where we previously sold five or six. It is true that the high speed drawing sells for more money; but in order to run at these high speeds, all the bearings have to be anti-friction instead of plain, the gearing more precise, expensive waste collection systems added, and numerous other features that more than double the cost of the older machines. But we are fully aware that if the textile business is to grow and prosper, machinery manufacturers must continue to improve the machines and their method of operation. It is to the advantage of each machinery manufacturer to come out with the new machine first.

What Lies Ahead?

Compared to the years during which most of our present-day machines evolved, today's technical resources are tremendous; and within a score of years, or less, the manufacture of textiles may be completely revolutionized. In the meantime mills will find it necessary to have men with technical backgrounds to run the new machines and men skilled in the old techniques to operate the old. Mill management will have to have both until entirely different machines are designed, around which can be constructed a building for streamlined mass production.

Instrumentation

Before we can improve the performance of any machine or process, we must have means to measure what that machine or process produces. Up to 1930, about the only measure we had of performance was weight. Weight is still important, but it does not tell us much about the small increments of variation without tedious, costly analysis. When the writer was given the assignment of designing a new drawing frame making sliver from laps rather than from cans, the only method of measuring was to weigh the sliver—first, by the usual yard increments; later, by six-inch lengths; and, finally, inch-by-inch. Cutting sliver in one-inch lengths and weighing them took a tremendous amount of time and the results were not too accurate due to the difficulty of getting the sliver cut precisely into one-inch lengths. Therefore, to perfect the lap drawing, I had to design the Saco-Lowell Sliver Tester and devise a method of evaluating the resultant charts. This was a relatively simple mechanical instrument not to be compared with the latest electronic

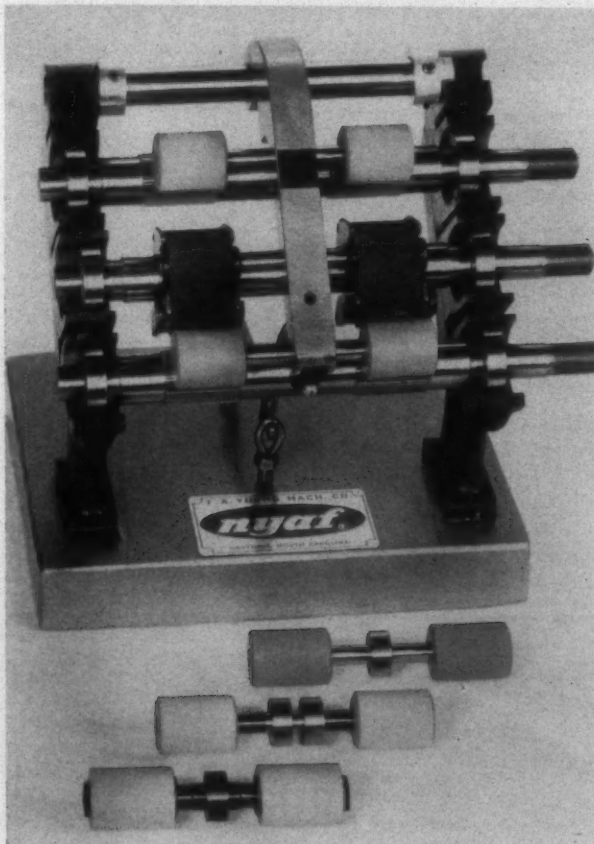
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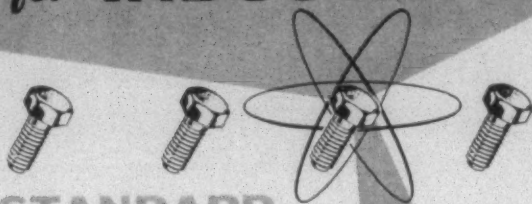
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evenness testers. Not only does the electronic tester now measure the magnitude of cyclical variations but also with the spectrogram we can measure the frequency of the variations.

By means of such instruments, from the picker through spinning and twisting, we can single out the specific element in any machine that is causing any deviation from normal. Not all of these deviations are important; but by the use of these instruments, the magnitude and frequency can be determined and if either or both are excessive, means usually can be found to correct same.

Studies of this type have led to more and more precise machinery. Anti-friction bearings have replaced plain bearings; roll eccentricity reduced to .002 or .003 total indicator reading; and even some gears are being shaved to maintain uniformity of angular velocity.

Our instruments also have proved to us what our grandfathers knew by experience: that there are places where extreme accuracy makes little difference. For example, if a front top roll was making bad yarn, that top roll was placed in the back line provided the covering still looked good, and the newly covered roll was installed in the front line. We now know that the variation in the yarn caused by an eccentric top roll varies inversely with the draft.

In a modern spinning frame, where the draft between the front roll and middle roll or apron may be 25 or 30, it is important to keep this runout down to .002 or .003; but in the back zone, with a draft of only 1.3 or so, runout is of little importance. Of course, if the top roll covering is hollowed out so that the roving slips through at times, it should be rebuffed or recovered. Likewise, there are other elements that are not critical; but, in general, the more precise the machinery, the lower the coefficient of variation of the resultant yarn.

In the Saco-Lowell laboratory, besides the usual instruments for measuring sliver, roving and yarn, we built some special machines for our own purposes. For example, we have a photo-electric instrument that measures every inch of a lap—transversely as well as longitudinally; strain gauges that record the tension in yarn as it is spun without touching it; a high speed camera that can record the angular velocity of a traveler at 10,000 r.p.m. This camera takes 9,000 pictures per second and the variation in speed of the ordinary traveler as it drags around the ring is quite substantial. From such instruments and scientific study have evolved some of our latest developments.

Automation And Automatic

These two terms are frequently used as synonyms, but actually they designate two quite different mechanisms. Automatic means inherent power of action, and many machines fall within this definition.

Automation is the technique of making a process or system automatic and usually is tied in with feedback or electronic devices. We have heard a lot about automation in the machine tool and automobile industry within the last few years, and it is truly amazing how cylinder blocks are fed, positioned, machined and gauged, tools exchanged, chips removed, and similar operations without human hands operating the controls. Sometimes automation is too costly and sometimes, as stated before, slight errors do no harm.

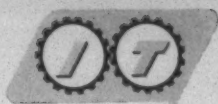
One of the early applications of automation in the textile industry was the Saco-Lowell Automatic Control Feeding System, introduced in 1933. This is a truly automated system

because it employs a feedback device. When all the feed chutes are full, the surplus cotton returns to the starting point and the feeders stop. Electric controls are used.

Since the introduction of the Lap Varimeter, several people have questioned why electronic controls have not been applied to the picker. Of course we have electric controls; that is, electric switches operated by mechanical feelers in the modern opening and picking room, but we have never applied *electronic* controls to these machines. This does not mean we have not studied thoroughly many areas in these machines. Two or three years ago, we investigated the use of Beta rays as a possible means of control of the thickness of the picker lap. Beta rays are used quite extensively in the steel and paper industries. At the same time, we studied the variation of the lap as produced by a Saco-Lowell picker equipped with a blending reserve, the No. 7 Evener with super-sensitive belt shifter and other standard parts. Strain gauges were applied to the evener mechanism and recording tachometers to the feed rolls. It was found that the efficiency of the much maligned cone box and evener mechanism was better than 90%; therefore, it was agreed that it was inadvisable to proceed with the Beta ray application as this would have added \$7,000 to the cost of the picker for less than a 10% improvement. We have not abandoned trying to improve the picker lap, but we think there are better places to install automated controls.

Most mills today spin the yarn from single roving and most of this roving is one-process. Drafting of a single end never improves the uniformity; the best that can be attained is that the errors in the back stock are not made worse. Therefore, the last place the uniformity can be improved is in the finisher drawing frame. This we have done. The Saco-Lowell/Uster Versa-Matic Drawing Frame was introduced to the trade at Milan last Fall. You will see it at Atlantic City. It is a true automated machine with electronic controls; it has four lines of drafting rolls; the third and back lines draw down the sliver in the usual manner, with a draft of 3 to 5. Between the second and third lines is the measuring device; there is no draft in this zone. If the combined slivers are too heavy, the front roll speeds up; if too light, the front roll slows down. Because this is an electronic device, the response is lightning fast. Unlike other eveners, the correction is made while the sliver is still between the drafting rolls and not after the error has passed through the rolls. The result is that slivers with amazing regularity are produced. Breaker drawing or comber slivers with deviations 25% from normal are entirely corrected. One sliver out of four can be added or dropped out, and the resultant sliver will still be normal. This is the first machine in the mill to function with a correcting control system as do the elaborate control systems now used in, for example, auto-pilots or guided missiles. The two elementary components in all closed-loop systems are: a device to measure the quality to be governed, and the means for controlling that quality. We consider it a giant step towards the automated mill of tomorrow.

The major textile processes from raw fiber to fabric, however, are not easily adapted to automation. Either there is a wide difference in velocity or in the quantity of stock handled per unit of time. It is not likely we can bridge by automation the yarn mill with the weaving shed or tie the loom to finishing and printing machinery. But the difficul-



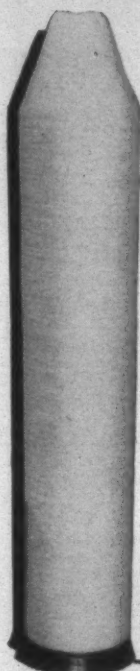
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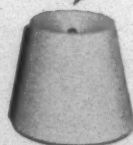
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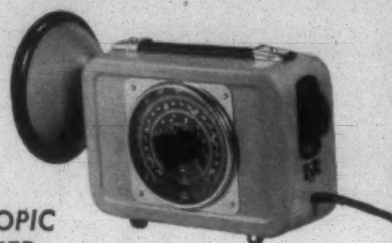
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from seeing what can be done by partial automation.

Roving Frame

An example of what can be done is the Saco-Lowell
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Recognizing the continued pressure for larger packages,
higher speed and reduced maintenance, it became apparent
that if we were going to achieve a real breakthrough on
these areas, we needed a completely new concept of roving
frame construction.

Flyers in their present style have been with us since
Leonardo da Vinci's time. We, and others, have made
changes and improvements, but the basic design and opera-
tion have remained the same. The roving frame of today is
substantially the same design produced in 1870.

So, it was that in 1956, we decided to bury the antiquated
designs of yesterday, start with a clean drawing board, and
take a brave step into the future. At Atlantic City we are
introducing to the world what we consider the roving frame
of tomorrow.

A Brief Description

Flyers mounted on long vibrating spindles, and bobbins
running in bolsters mounted on a reciprocating carriage
have been replaced by a new patented assembly. Picture a
solid, smooth box about a foot wide and 18 inches high,
running the full length of the frame. Out of the box
protrude the spindles, driven by shafts below. Around each
spindle is a flyer forming a complete loop mounted in ball
bearings, top and bottom, and, for the first time, dynamically
balanced. There are three longitudinal shafts within the
box, instead of the usual four, that drive the bobbin, the
flyer and a screw mechanism that traverses the bobbin up
and down within the flyer. The boxes contain oil which
lubricate everything, like the oil does in the crankcase of
your car. Relubrication, except for oil changes over very
long intervals, is eliminated. The flyers are not removed for
doffing; the spindles run down to the lower position, and
the full bobbins are removed and replaced with empty bob-
bins. Likewise, a completely new drive mechanism is pro-
vided, all in the head-end, and all running in oil. There
are no cones, no belts to slip, no horsehead, no chains except
for the lifting rolls and these, too, are completely enclosed;
there are the usual change gears; draft, lay, tension, taper
and twist.

The ideas embodied in this construction allow us to run
larger packages, higher speeds, with less maintenance and
cleaning than ever before.

Versa-Matic Drawing Frames

Besides the roving frame, we are exhibiting two Versa-
Matic drawing frames; one designed to run continuously on
carded work at 600 f.p.m. This has a new application of a
pneumatic waste collection system for all lines of rolls, top
and bottom, as well as a duct to take away fly that normally
collects around the trumpet. Some of the bearings have been
made larger to take care of the higher speeds; all of the
bearings are anti-friction; and those that drive the tube gears
are lubricated by oil circulated by an oil pump. Of course,
at these high speeds, all possible jam or lapping points are
protected by electric stop motions.

The second Versa-Matic is our ADC Frame—Automatic

Draft Control—a joint development of Saco-Lowell and the Uster Corp., which I described earlier.

We will also exhibit two spinning frames. An SJ Gwaltney-type frame with a new MagneDraft double apron drafting assembly and the same type of chassis equipped with a new double apron drafting element, known as the SJ-4C, for worsted and long staple man-made fibers.

We also plan to show the S.R.R.L. Opener combined with the air cleaner which has now been installed in a number of mills and is very efficient in removing pepper trash and other impurities found in today's mechanically harvested cotton. This is an improved model made by Davidson-Kennedy.

We will also exhibit a working model of the Fleissner Dryer, now made in Sanford, N. C.; as well as two Allma Twisters, now made in Germany.

What Of The Future?

And what about the future? Will man-made fibers and nonwovens materially change the entire textile market?

We feel both will make progress, but the change will be gradual and not occur overnight.

As mentioned at the beginning, the total use of all fibers is expanding and by 1970 should be in the neighborhood of 8,000 million pounds in the U. S. Of this, roughly 50% is expected to be cotton; 40% man-made fibers; with wool, silk and other natural fibers making up the balance. Of course this estimate may be upset considerably by new discoveries in the man-made field. As Professor Schwarz of the Massachusetts Institute of Technology said a few years ago, new fibers are coming out of the test tube almost every day; and at the recent Textile Research Institute meeting five papers were given, each announcing the commercial development of a new man-made fiber. To date, however, there is no fiber that completely fulfills all the desirable characteristics necessary to make the perfect garment. Dr. Kenneth Fox said in a speech, two or three years ago, that the miracle fibers have not always come up to their billing and through research and promotion people have rediscovered another pretty good fiber named cotTON. By chemical treatments, cotton has regained quite a bit of the market, particularly in the wash-and-wear trade.

This is not to say that nylon, Dacron and other man-made fibers have not and will not contribute to the enhancement of textiles; for, as we learn how to better engineer our fabrics, I am certain more and more blends will be used, combining the virtues of both natural and man-made fibers.

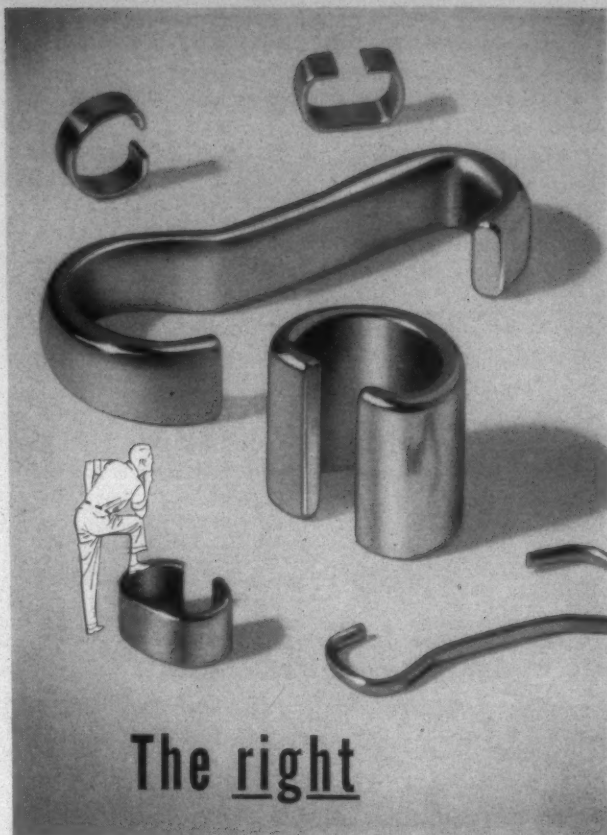
Nonwovens

One of the fields in which man-made fibers will be increased is in the manufacture of nonwovens. Nonwovens only consume about 2% of the fibers used at present, but it is a growing industry and must be closely followed.

Starting as a use for comber noils and other cotton waste, it has been found necessary to use good cotton for most purposes. However, man-made fibers—rayon, acetate, nylon, Vinyon, Dacron and some glass fibers—are now being used.

All nonwovens are specialties, designed for some particular end-use. Much of the processing is secret and while we have made some machines applied to nonwoven lines, we are not working on it as diligently as in other fields.

For apparel use, nonwovens are essentially two dimen-



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sional assemblages of textile fibers without the ability to drape and to conform to the third dimension. Until this problem is solved, it is our feeling nonwovens will continue to be specialties.

Another field about which there has been considerable discussion in recent months is textured yarns. There is little doubt that progress along this line will further encroach on the spun yarn field. But we feel for the foreseeable future that spun yarns and woven fabrics are going to dominate the textile market. Opening, picking, carding, drawing, combing, roving, spinning and twisting are all fundamental spun yarn machines and unlikely to be displaced in the near future, although their ultimate form may be hard to recognize. Opening and picking have been combined as far as labor is concerned and it may be quite possible to combine other machines. The question is one of economics as much as mechanics.

a *Saco-Lowell Bulletin*, March 1928
b *Saco-Lowell Bulletin*, April 1930
c *Saco-Lowell Bulletin*, October 1931
d *Saco-Lowell Bulletin*, May 1937

e *Saco-Lowell Bulletin*, May 1937
f *Saco-Lowell Bulletin*, April 1952
g *Saco-Lowell Bulletin*, October 1928

Donald Comer Jr. Named Head Of Alabama Textile Mfrs. Assn.



Comer

Donald B. Comer Jr., executive vice-president of Avondale Mills, Birmingham, Ala., was elected president of the Alabama Textile Manufacturers Association at its annual meeting recently in Biloxi, Miss. Comer succeeds outgoing president Joel E. Johnson, Geneva Bama Cotton Mills, Geneva, Ala. Moving up from treasurer to vice-president is Sidney W. Tingen, treasurer of West Boylston Mfg. Co., Montgomery, Ala. The newly-elected treasurer is W. E. Dunn, vice-president of Huntsville Mfg. Co., Huntsville, Ala.

Elected to the board of directors were Frank Bennett, president of Anniston Mfg. Co., Anniston, Ala.; Joe Jennings, West Point Mfg. Co., West Point, Ga.; Frank Horsley, Pepperell, Ala.; and Fred Phillips, Valley Mills, Columbiana, Ala.

The group was told by John H. Dillon, president of the Textile Research Institute, Princeton, N. J., that major textile companies could build up profit margins by establishing sound applied research and development organizations. Dillon pointed out that such research organizations could develop exclusive processes and products which would enable the company to step out ahead of competition.

J. Craig Smith, president of Avondale Mills, Sylacauga, Ala., in speaking to the group said that the growing increase in imports of cotton in the form of manufactured cotton products is a threat not only to textile manufacturers but to cotton producers and other segments of the cotton textile industry. Smith, president of the National Cotton Council, said that imports of cotton products in 1959 represented a bigger loss than the cotton industry has sustained to any single competitor in the past five years.

Joel E. Johnson, in his remarks as retiring president of the association, called on the members of the textile industry to take it upon themselves to hold production to demand. He said, "It is high time that the cotton industry generally and the textile industry particularly, be well advised about the business at hand, take a positive aggressive approach to

their problems and have no hesitancy in speaking out when they know they are right."

Members of the Alabama Textile Education Foundation, meeting in conjunction with the Alabama Textile Manufacturers Association, were told that enrollment at the School of Textile Technology, Auburn University, had declined for the second straight year. As a result of the foundation's assistance in providing the textile research laboratory, the textile department's research program is now running at the rate of more than \$50,000 a year.

Since its organization in 1954, the foundation has provided Auburn's textile school with \$71,750 in cash from foundation funds.

4th Quarter 1959 Production Of Cotton Broad Woven Goods Up 3%

Cotton broad woven fabric production in the fourth quarter of 1959 at 2,423,825,000 linear yards was 3% above the previous quarter's total and 4% above the fourth quarter 1958 level. Production of sheeting and allied coarse and medium yarn fabrics at 639,953,000 linear yards was down 1% from the previous quarter's level but up 6% over the comparable period of 1958. Duck and allied fabrics production at 56,716,000 linear yards was up 5% as compared with the previous quarter and up 4% over the final quarter of 1958. These figures are from the U. S. Bureau of Census.

4th Quarter Production Up 3% On Man-Made Fiber Fabrics

The production of broad woven goods of man-made fibers totalled 628 million linear yards during the fourth quarter of 1959, according to figures given by the U. S. Bureau of Census. This was 3% above the third quarter output and 1% below the output of the fourth quarter of 1958. Rayon and acetate fabric production at 387,364,000 linear yards was up 10% from the comparable period in 1958 but about the same as the previous quarter.

Production of man-made fiber fabrics except rayon and acetate totalled 228,692,000 linear yards in the final quarter, an increase of 8% over the previous quarter and 20% over the last quarter of 1958.

Tufted Textile Shipments Up In The Second Half Of 1959

Total shipments of tufted textile products amounted to \$232.1 million during the second half of 1959. This compares with shipments of \$215 million during the first half of 1959 and \$210.7 million during the second half of 1958, according to the Bureau of Census.

The value of manufacturers' shipments of tufted rugs and carpeting during the second half of 1959 amounted to \$195.5 million. This was 4% above the shipments during the first half of 1959 and 9% above the comparable period of 1958. In the first half of 1959 shipments of rugs and carpeting larger than 4x6 feet amounted to \$159.1 million and compares to shipments of \$155.4 million during the first half of 1959 and \$143 million during the last half of 1958. Shipments of rugs 4x6 feet or smaller increased 11% over the first half of 1959 and 2% over the second half of 1958.

The value of manufacturers' shipments of tufted bed-

spreads for the second half of 1959 was 18% above the level of shipments during the comparable period of 1958. During the same periods, dollar shipments of tufted robes declined 17%.

Manufacturers consumed 180 million pounds of yarn and fabric for the production of tufted products during the second half of 1959. This was 6.2 million pounds more than the reported consumption for the previous half year. The consumption of cotton tufting yarn increased from 34.4 million pounds to 39.2 million pounds, while the consumption of 100% rayon and acetate yarns decreased to 42.4 million pounds from the 45.6 million pounds consumed during the first half of 1959. Wool yarns consumed in tufted rugs and carpeting totalled 21.8 million pounds, an increase of 1 million pounds, while the consumption of other tufting yarns was 15.3 million pounds for the second half of 1959.

February Woolen And Worsted Production Up Slightly Over 1958

The woolen and worsted systems weekly average rate of fiber consumption in February at 15,776,000 pounds was approximately equal to the January rate but 1% above the February 1958 rate, according to the Bureau of Census. The weekly average raw wool consumption during February was 8,858,000 pounds (scoured basis) or 4% below the January level, and 2% above the February 1959 rate. Consumption of apparel class wool was 1% below the January rate and 1% above that of February of last year.

The rate of consumption of carpet class wool decreased 9% from the consumption during the preceding month, and was 3% above the February 1959 rate.

U.S.D.A. To Spend An Additional \$600,000 On Cotton And Wool Research

The U. S. Department of Agriculture plans to spend an additional \$600,000 on cotton wash-and-wear and woolen fabric research, according to testimony given before the House Appropriations Subcommittee. Dr. J. W. Irving Jr., deputy administrator for utilization research and development of the Agricultural Research Service, said that plans for the year beginning July 1 call for an increase of \$503,000 in the present \$2.5 million cotton research program and an increase of \$100,000 in the wool research program.

National Cotton Council Announces Program For Research Clinic

The program for the eleventh annual Cotton Research Clinic to be held at the Grove Park Inn, Asheville, N. C., on May 31-June 2, has been announced by the National Cotton Council, sponsor of the meeting.

General chairman of the meeting is Earl Heard, vice-president, West Point Mfg. Co., West Point, Ga. Chairman of the first session is Werner Pels, utilization research division staff, National Cotton Council.

Technical presentations for the first morning session on Tuesday, May 31, are: "A New Cotton Trashmeter," Har-

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Miss Sandra Lee Jennings, of Riverside, California, was selected Maid-of-Cotton for 1960. Textile Manufacturers select Burk-Schier Wet Processing Agents for dyeing and finishing yarns and fabrics made of cotton.



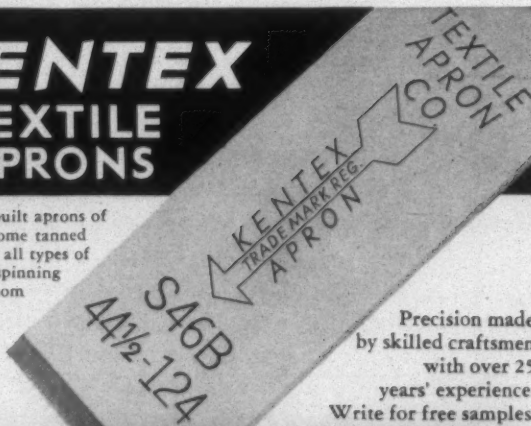
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vin Smith, cotton marketing specialist, U. S. Department of Agriculture, Washington, D. C.; "Effect of Short Fibers on Yarn Manufacturing and Quality," John Tallant, associate physicist, U.S.D.A. Southern Regional Research Laboratories, New Orleans, La.; "Effect of Length on Cotton Fiber Properties," Ludwig Rebenfeld, group leader, Textile Research Institute, Princeton, N. J.; "A Fractionation Method for Measuring Short Fiber Content," Hugh M. Brown, research consultant, Clemson, S. C.

Presentations at the second session Tuesday afternoon, under Chairman B. F. Tipton, vice-president, Woodside Mills, Greenville, S. C., are: "Span Length as a Fiber Length Criterion," C. J. Craven, associate professor of physics, University of Tennessee; "Mill Appraisal of the Digital Fibrograph and Fibrosampler," Laura Hall, The Kendall Co., Paw Creek, N. C.; "Mill Control of Short Fiber Percentage for Improved Spinning Performance," Lindsay Dexter, assistant treasurer, Pepperell Mfg. Co., Boston, Mass.

The morning session on Wednesday, June 1, chaired by Ashley Roberts, assistant superintendent, China Grove Cotton Mills Co., China Grove, N. C., will cover: "An Automatic Draft Control System for the Draw Frame," Paul West, development engineer, Saco-Lowell Research Center, Clemson, S. C.; "Recent Developments in Roving Frame Design," Carl Brandt, Whitin Machine Works, Whitinsville, Mass.; "Mill Evaluation of a Top Roll Suspension System for Spinning," C. H. Williams, president, Swift Mfg. Co., Columbus, Ga.

Wednesday afternoon will be reserved for informal discussions and will be followed by the clinic dinner that evening. The final session on Thursday morning will be under the chairmanship of Richard Tuttle, director, research and quality control, Fieldcrest Mills, Spray, N. C. Topics will be: "New Developments in Roving Package Winding," G. G. Fornes, Institute of Textile Technology, Charlottesville, Va.; "A New Look at Cotton Quality Relationships," Franklin Newton, cotton technologist, U.S.D.A., Washington, D. C.; and two papers on "Influence of Fabric Construction on Properties of Resin Treated Fabrics." Tear strength will be covered by E. James Stavarakas, senior research associate, Fabric Research Laboratories Inc., Dedham, Mass., and crease recovery and tensile strength by Richard Arceneaux, S.R.R.L., New Orleans, La.

Satisfying Retailer Quality Standards

(Continued from Page 116)

formity and forwarded to the trim set fabricator with shipment of material.

(2) Additional copies of the certification and test results are forwarded concurrently to the other Ford trim set fabricators that are being supplied the particular item involved.

(3) Subsequent production lots are fully certified, or certified on the basis of a reliability test, plus a reference to the previous fully certified lot number.

(4) As continued production lots are fully certified, at whatever frequency desired, copies of test results are mailed to all applicable Ford Division trim set suppliers.

According to Eagle, Ford's experience indicates that there is a new awareness by Ford's textile suppliers for strict quality control on their part to meet the rigid requirements imposed by the company's program. He said both vendor and vendee are mutually reaping the inherent advantages of this concept.

Promotions, Resignations, Honors,
Transfers, Appointments, Elections,
Civic and Associational Activities

PERSONAL NEWS

W. C. Chisholm has retired as president and treasurer of Foster Machine Co., Westfield, Mass. Chisholm had served in the



Chisholm



Connor

capacity of president since 1946. . . Edward C. Connor has been named to succeed him. Connor has been with the company for the past 25 years, serving as vice-president and director of sales. He is a graduate of Brown University and of the University of Pennsylvania Graduate School of Business Administration.

John H. Bolton Jr. has been named vice-president of the marketing division of Whitin Machine Works as part of a series of major changes in the company's sales and marketing operations. The changes, placing all sales, service and marketing functions under the supervision of Bolton, are designed to strengthen customer service. Bolton will also supervise the activities of the synthetic filament machinery sales department, export sales, order and contract administration, marketing service department and product planning department.



Cone

Cesar Cone, president of Cone Mills Corp., Greensboro, N. C., has been presented with the Distinguished Citizen Award of the Greensboro Chamber of Commerce. Cone, secretary of the local airport authority, was cited particularly for his work on behalf of the Greensboro-High Point airport.

William Roberts has been named superintendent of Moultrie (Ga.) Cotton Mills. Roberts succeeds W. O. Ruffins who has retired.

P. S. Howe Jr., chairman of American Thread Co. was recently honored for long distinguished service to the textile industry. Over 100 industry leaders, business colleagues and close personal acquaintances gathered at a Merchants Club banquet in

New York City honoring Howe. He is a former president of the Textile Research Institute. He has been a director of The Thread Institute for 19 years and an executive committee member for 14 years. Howe is a director of the Institute of Textile Technology, and has been a director of A.C.M.I. since it was founded in 1949.

Charlie R. Moore has been named superintendent of the Texas Department of Correction Textile Mill at Huntsville, Ga. Moore has been connected with Denison (Tex.) Cotton Mills and other Southern mills.

Dr. Howard J. White Jr. is vacating his post of director of research at Textile Research Institute, Princeton, N. J. Dr. White has not made known his plans. Dr. J. H. Dillon, president of the institute will take over Dr. White's duties temporarily.



Loughlin

Kenneth C. Loughlin has been elected president of Celanese Corp. of America, New York City, succeeding Harold Blancke. Loughlin has been executive vice-president since 1956. He joined the company in 1929 in laboratory and sales work in Charlotte. He was appointed a vice-president in 1951 and a Celanese director in 1954. While relinquishing the presidency, Blancke will continue to serve as chairman and chief executive officer of the corporation.

James R. Kennedy has been named to the newly established position of vice-president—financial. Since 1957 he has served as vice-president in charge of industrial relations. Kennedy joined the company in 1944 as an accountant in the firm's plastics division headquarters in Newark, N. J.

R. Knox Clement, former service supervisor in the Charlotte division office of the Whitin Machine Works, has been promoted to salesman. Clement joined Whitin in 1941 as a serviceman.

Norman L. Seltzer has been named manager of product research for the textile division of The Kendall Co. The textile division is responsible for all textile operations of the company at its eight plants in South Carolina and Alabama. Seltzer has been with the company in its Walpole, Mass., research department. Before joining Kendall in 1956 he was with the American

Woolen Co. and previously owned and managed a fancy weave textile plant.



Martin

M. J. Martin has been named president of Penick & Ford Ltd., New York City. He succeeds Dr. J. M. Widmer, who has retired after 41 years with the company. Martin joined the firm in 1915 in New Orleans and transferred to New York in 1935.

He became a vice-president in 1947 and executive vice-president in 1957. He has been a director of the company since 1952.

Richard Louis Alford has been named manager of Gold-Tex Fabrics Corp., Rock Hill, S. C., succeeding George Peeler who is no longer with the company. Alford was previously with Lummus Gin Co., Columbus, Ga. He has also been connected with the Alabama Mills Corp., now a division of Dan River Mills.

C. B. Mahaffey has been named superintendent of the Calumet Plant of Callaway Mills Co., LaGrange, Ga. Prior to his transfer, he was superintendent of the Milstead, Ga., plant. Mahaffey was associated with Springs Cotton Mills before joining Callaway in 1936.



Halford

Joseph Halford has joined Stein Hall & Co., New York City, as sales technician to the textile industry. He is assigned to the company's Charlotte branch sales office and will service the printing and finishing textile plants located in Virginia, North Carolina and South Carolina.

J. Lawrence Orr has been promoted to Charlotte regional sales manager and Joseph P. Sills has been promoted to Charlotte service supervisor in a reorganization of the Whitin Machine Works sales department.

Harold Gray Hencken has been named director of the engineering and research division of American Felt Co., Glenville, Conn. Hencken will be responsible for all technical activities of the company including basic research, new product develop-

PERSONAL NEWS

ment, technical services and customer engineering consultation. He will also have general supervision over the company's control laboratories in the four plants located at Franklin, Mass.; Newburgh, N. Y.; West-erly, R. I.; and Glenville, Conn. He joined American Felt in 1956 as a research en-gineer.



Fuchswanz

William A. Fuchswanz has been named sales manager of the textile machinery division of Venango Engineering Co., Philadelphia, Pa. Fuchswanz is a former sales representative of Smith, Drum & Co., and has been actively engaged in the textile industry for more than 20 years. . . . Harry McCandless, formerly sales manager of Venango, has been placed in charge of the special products division and purchasing activities.

John C. Morrison has been named president of Morrison Machine Co., Paterson, N. J., succeeding his father, the late James L. Morrison. He has been connected with the company since 1923. Morrison produces finishing equipment.

Paul Kincaid has joined Carlton Yarn Mills, Cherryville, N. C., as head of the cotton department. Kincaid was formerly president of Kincaid Cotton Co., Gastonia, N. C., a company which he founded in 1941.

George H. McLoof has been named president of Mooresville (N. C.) Mills of Burlington Industries succeeding John Russell, who has been given broad sales and merchandising responsibilities with Burlington. . . . Charles C. Bassett has been named vice-president of Mooresville.

American Enka Corp., Enka, N. C., has announced new assignments for two of its officers and a reorganization of its marketing division. Robert B. Armstrong, assistant vice-president, who has been acting in the capacity of assistant to the president, has been elected treasurer. . . . Maurice Winger Jr., formerly secretary and assistant general counsel, has been appointed assistant to the president and will also continue as corporate

secretary. . . . In the marketing division, M. Bolan Carr has been appointed director of sales for textile rayon and nylon products. He will also be in charge of the company's district sales offices in New York City, Greensboro, Chattanooga, Tenn., and Providence, R. I. . . . Claude S. Ramsey Jr. has been named director of market development. His responsibilities will include Enka's merchandising and advertising functions, marketing technical and customer service programs, and marketing research activities. . . . T. Redmond Thayer has been named director of sales for tire and industrial yarns and rayon staple fiber.

J. D. W. Hubbeling, a prominent technical authority in the American rayon industry, has retired as director of processes at American Enka Corp. His retirement comes upon the completion of 40 years in the man-made fiber field. Hubbeling is being succeeded by Dr. Noach Benninga, who formerly served as product control chemist for synthetics.

William E. Turner has been named an assistant divisional manager of Draper Corp. In this capacity, he will assist Donald Marshall, divisional manager. Turner joined the corporation in 1951. He will make his headquarters in Spartanburg, S. C.

Benjamin B. Peacock has been promoted to Atlanta regional sales manager; Richard W. Dunn has been promoted to assistant regional sales manager; and David A. Wagstaff has been promoted to Atlanta service supervisor in a reorganization of the Whitin Machine Works sales department.

M. L. Morgan, assistant superintendent of J. P. Stevens & Co.'s Republic Plants of Great Falls, S. C., has been made superintendent of the Industrial Plant, Rock Hill, S. C., following the resignation of M. H. Ramsey.

Dr. Harold W. Stiegler, for the past 14 years director of research at the American Association of Textile Chemists & Colorists, was honored on his retirement at a recent dinner. Dr. Stiegler engaged in industrial research at the American Woolen Co., National Aniline & Chemical Co., Cheney Silks, Rohm & Haas Co.'s textile division, and American Cyanamid Co., prior to his affiliation with the A.A.T.C.C.

Thomas J. Gillick Jr. has been named manager, product application and engineering, in the marketing division of American

Felt Co., New York City. Gillick will be located at the general offices in Glenville, Conn. He joined American Felt in 1949 as chief chemist and director of quality control at the Glenville plant. He is active in the affairs of the American Association of Textile Chemists & Colorists.



Mahan

T. A. Mahan, formerly associated with Proctor & Schwartz Inc., Philadelphia, Pa., has been appointed district manager in the sales department of The Textile Shops Inc., Spartanburg, S. C. Mahan has been primarily associated in the design and sales of air drying and finishing equipment for the textile industry.

John G. Staudt has been named president of the Dobeckmun Co., division of the Dow Chemical Co., Cleveland, Ohio. Staudt was previously executive vice-president of the Dowell Division of The Dow Chemical Co. He succeeds Thomas F. Dolan, founder of Dobeckmun, who has asked to be relieved of the responsibilities as president which he has held for 33 years. Dolan will continue to serve as chairman of the Dobeckmun executive committee.



Campbell

John F. Campbell has been named director of public relations for the American Cotton Manufacturers Institute, central trade association for the textile industry, with headquarters in Charlotte. Campbell has been a member of the public relations staff of the American Petroleum Institute for the past ten years and director since 1958.

Jack Harris has been appointed assistant director of manufacturing for the new textile division of The Kendall Co. Kendall's textile division includes seven cotton mills in South Carolina and Alabama and a finishing plant in Bethune, S. C. Harris entered The Kendall Co.'s management training program in 1946. He became an assistant overseer in 1948 and served as overseer at the Addison Plant in Edgefield, S. C., assistant to the manager of the Oakland Plant, Newberry, S. C., and the Pelzer Plants, Pelzer, S. C. and superintendent of the Pelzer Upper Plant.

Stewart W. Schulmeyer and James J. Secor Jr., have been promoted to new positions in the glass textile section of Johns-Manville Sales Corp., Toledo, Ohio. Schulmeyer becomes staff manager of plastic reinforcement sales and Secor replaces Schulmeyer as staff manager for industrial yarn sales.

Robert I. Dalton Jr. has been promoted to vice-president, domestic sales at Whitin Machine Works. Dalton joined Whitin in 1946 as a selling agent in the Charlotte territory. He was made Whitin Southern agent in 1955 and manager of cotton system

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machinery sales in 1959. Dalton will operate from the company's main offices in Whitinsville, Mass. His new responsibilities include sales of all Whittin textile machinery except synthetics in the U. S. and Canada.

Loy Stokes Reynolds has joined Cone Mills Co.'s Proximity Plant as assistant overseer of spinning. Reynolds was previously overseer of spinning at Dan River Mills.



Brown

L. Woody Brown is now associated with Frank G. North Inc., Atlanta, Ga., and Pioneer Heddle & Reed Co. Brown will live in Greensboro, N. C., and represent his companies in sales and technical service in that area. He is a graduate of North Carolina State College and was formerly with Whittier Mills and Dan River Mills.

J. Stewart Campbell has been appointed special projects manager for the research and development activities related to Darvan by the Celanese Corp. of America, New York City. Campbell will be responsible for co-ordinating the Darvan pilot plant work at the Goodrich Development Center at Avon Lake, Ohio, with research and development programs being conducted by various Celanese departments.

Several promotions have been announced at the Dunean Plant of J. P. Stevens & Co., Greenville, S. C. Harold A. Gibbs has been

promoted from superintendent of preparation to plant superintendent. . . . J. C. Stevenson has been promoted from general overseer of throwing to superintendent of preparation. . . . William H. Gray has been promoted from overseer of throwing to general overseer of throwing.

OBITUARIES

John Chaloner Borden, 59, chairman of Borden Mills, Kingsport, Tenn., died April 8 in Nairobi, Kenya, Africa, where he had completed a safari. Mr. Borden was a member of the board of a number of organizations including the Bank of Manhattan prior to its merger with Chase National Bank. He leaves his widow and a son.

Basil D. Browder, 61, executive vice-president of Dan River Mills Inc., died April 1 at his home in Danville, Va. Mr. Browder joined Dan River in December 1916. He was elected vice-president in charge of manufacturing in 1949, a member of the board of directors in 1950, and executive vice-president in 1952. He was active in the U. S. Chamber of Commerce and was a director of a number of firms. Survivors include his widow and a step-son.

Ralph F. Culver, 78, well known in the textile and dyestuff fields, died in Providence, R. I., on April 15. Mr. Culver had worked for the Glenlyn Print Works, Holliston Mills, Arnold Print Works and, Joseph Bancroft & Sons Co. In 1921 he joined Ciba Co. Inc. and became a vice-president,

director and manager of its Providence office. He was a charter member of the American Association of Textile Chemists & Colorists National Council and a past chairman of the Providence Section. He is survived by his widow and two children.

Carl C. Harris, 79, chairman of the board of directors of the Rodney Hunt Machine Co., Orange, Mass., died April 4 after a brief illness. He began work at Rodney Hunt in 1904 as superintendent. From then until 1956, he served successively as treasurer, then president. Since 1956, when he retired as president, he had been chairman of the board. Surviving are his widow and five children.

William T. Hodges, 70, former superintendent of Roanoke Mill No. 2 of J. P. Stevens & Co., Roanoke Rapids, N. C., died recently in Roanoke Rapids. Mr. Hodges had served as superintendent of the plant from 1947 until his retirement in 1954. Survivors include his widow and a son.

Francis Winslow Poe Jr., 69, former vice-president of F. W. Poe Mfg. Co., Greenville, S. C., died March 19 in a Chattahoochee, Fla., hospital. He was a son of the founder of Poe Mfg., now a part of Burlington Industries. Surviving are his widow, a daughter and two sons.

Garf R. Russell, 66, for the past 12 years superintendent of Rex Mills Inc., Ranlo, N. C., died in a Charlotte hospital March 22. Survivors include his widow, four daughters and seven sons.

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ANDERSON, S. C.—Some 190 new Draper 50" XD looms will be installed in the Haynesworth Plant of Woodside Mills here as part of an expansion and modernization program which will cost \$1,032,000. The modernization includes the installation of Leesona's Unifil loom winders on existing and new looms. The 190 new looms are in addition to 720 now in operation. The modernization program is designed to make the plant more flexible and competitive in the synthetic and combination fabric field.

NEW YORK, N. Y.—Forge Mills Inc., a specialized converting corporation, has been purchased from A. Mal Malvin, the former majority stockholder and company founder. Purchase of the company has been made by a group from within the company. The new officers, all of whom are experienced in the industry and specialized operation of Forge Mills, are: Daniel Steinberg, president and general manager; Philip Cohen, vice-president and sales manager; Richard Chopak, vice-president and retail sales manager; Martin D. Greene, vice-president in charge of styling and merchandising.

BRIDGEPORT, PA.—James Lees & Sons Co. reports that 1959 was a very successful year. Net sales of \$83,802,000 were the highest in the company's history and represented an increase of 23% over the \$68,120,000 reported in 1958. Net earnings were also at record levels, reaching \$5,696,000, an increase of 50% over the \$3,805,000 earned in 1958. The company was acquired by Burlington Industries in March.

BALTIMORE, MD.—Sales for Mt. Vernon Mills Inc. in the first quarter of the current fiscal year were off 8% while profits from operations rose 6% as compared with the same period of 1959. Sales for the first quarter totalled \$10,742,000 against \$11,676,000 in the comparable period of 1959.

Earnings, before adjustments for non-recurring losses coming from the liquidation of the Newnan, Ga., properties, were \$324,000 as compared with \$305,843 for the like period last year.

DANVILLE, VA.—Net earnings for Dan River Mills Inc., for the quarter ended April 2, 1960, are expected to equal about 40 cents per common share, a gain of 48% over per-share earnings in the comparable period last year. Consolidated sales volume for the period just ended, based on preliminary figures, was approximately \$43,500,000, about a 2% increase over sales volume for the first three months of last year. The company's board of directors have approved an agreement to acquire the Sayles, Baltimore finishing plant near Asheville, N. C., on May 9, 1960. Under the agreement with the present owners, Sayles Baltimore Bleacheries Inc., Dan River is to acquire the plant, equipment, and other assets essential to a going operation, including real estate, for about \$2,800,000 in cash. The plant is fully equipped to bleach, dye, and finish cottons, rayons, and synthetic fabrics. Current employment is about 700.

CRAMERTON, N. C.—The Cramerton Mills Division of Burlington Industries has been awarded a contract for \$201,440 by the Military Clothing & Textile Supply Agency of the Philadelphia Quartermaster Depot. The contract calls for: cloth, polyester fiber, cotton cord, 4.3 oz., 45" wide. It is for 160,000 yards.

MILSTEAD, GA.—Callaway Mills Co. will close its plant here and transfer operations to the parent mills in LaGrange. The plant here, which produced tire fabric, employs some 850 persons and has a weekly payroll in excess of \$50,000.

GAFFNEY, S. C.—Hamrick Mills here has purchased all the assets, property and plant of Alma Mills, also of Gaffney. Purchase price was not revealed. Alma's main plant consists of 27,128 spindles and 548 looms producing print cloth and sheetings. Some 300 persons are employed. There will be no change in operation or personnel of the mill, it was reported.

KNOXVILLE, TENN.—Jefferson Woolen Mills, closed since March 10, has been sold and is expected to re-open. The buyer was not revealed nor the purchase price. Most of the 300 persons who were laid off when the mill closed are expected to be recalled. Jefferson had operated here continuously since 1921 until its recent closing.

NEW YORK, N. Y.—Profits of M. Lowenstein & Sons Inc. for the year ended December 31 rose to \$4,809,798 from the \$1,624,051 earned in 1958. Net sales for the year totalled \$259,656,530 as against \$254,988,222 in 1958. Total sales were \$433,019,352 as compared with \$438,702,603. The company reports that it entered

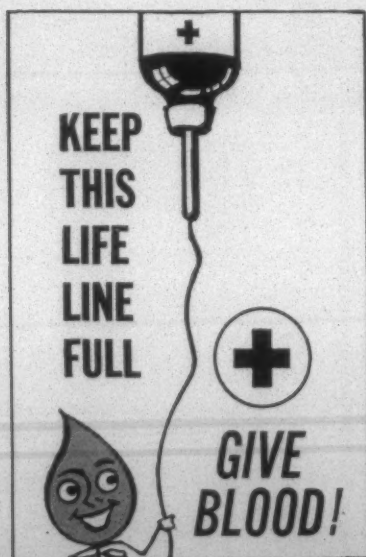
into 1960 with the largest unfilled order position in its history. During the year the company spent a total of \$8,671,000 for the acquisition of Chiquola Mfg. Co., Honea Path, S. C. The company said that the profit in the first quarter of the current fiscal year "looks like the best we've had since 1956." In the first quarter of 1956 the company had a profit of \$2,640,493. The company reported that all of its mills are running full. Unfilled order positions are very satisfactory and much higher than a year ago, the firm said.

NEW BEDFORD, MASS.—Edward S. Rudnick, representatives, here, has received a number of orders for O-M spinning equipment and other Japanese equipment. Delivery of 24 frames of OM-S sliver-to-yarn spinning was made at Long Shoals Cotton Mills' new plant at Lincolnton, N. C., recently. Also included are four O-M drawing frames with automatic can changing mechanisms. This equipment replaces yarn spinning production lost in a fire last Summer. An undisclosed number of full size spinning and drawing frames were recently delivered to Cone Mills' White Oak Plant. Cone is the tenth U. S. mill to order sliver-to-yarn equipment but is the first to be equipped with the new Kanegafuchi Auto-Doffer. Twelve frames of OM-D changeover equipment and four Daiwa super carding devices have been ordered by Joanna (S. C.) Cotton Mills.

DURHAM, N. C.—Capital expenditures totalling \$4 million have been approved for the current fiscal year and the coming one, 1961, by the board of directors of Erwin Mills, Durham, N. C. The improvements will be largely centered in completing the modernization of equipment in the spinning departments and in the company's dyeing and finishing plant. It also includes modernization of cloth storage facilities with an automatic conveyor system for its plants at Cooleemee.

NEW YORK, N. Y.—Collins & Aikman Corp. has reported higher profits and sales in the fiscal year ended February 27, 1960. Sales at \$48,967,136 were up 8% from the total of \$45,360,129 in the previous year. Net income for the latest fiscal year totalled \$1,338,661 as compared with \$1,168,758 in the previous year. Income before taxes was \$2,773,661 as compared with \$1,842,027 in fiscal 1959.

NEW YORK, N. Y.—Indian Head Mills has announced agreements to purchase two other firms. It has agreed to purchase operating assets of Bernhardt Ulmann Co. for about \$4,400,000. The sale is subject to the approval of Ulmann stockholders. If it is approved, Bernhardt Ulmann will operate as a division of Indian Head Mills with no change in management or operating personnel. Ulmann manufactures and imports hand knitting yarns, art needlework products and decorative linens. Indian Head has also en-



tered into an agreement with Gera Corp., a subsidiary of Glen-Alden Corp., whereby an Indian Head subsidiary will purchase Gera's USF-Aspinook Finishing Division for approximately \$6,900,000. USF-Aspinook operates plants in Adams, Mass., and Hartsville, S. C. The concern will continue to operate under its present management as the USF-Aspinook Finishing Division of Indian Head Mills. The company has also announced that it will enter the synthetic fiber field with two blends of Dacron/cotton and Arnel/cotton.

PROVIDENCE, R. I.—Leesona Corp. reports new orders for its Unifil loom winders from Stonecutter Mills Corp., Spindale, N. C., and Shelby (N. C.) Mills Inc.

CLEARWATER, S. C.—Clearwater Finishing Plant, division of United Merchants & Manufacturers, has announced plans to build a new 4,000-square-foot addition. The addition will allow expansion of the folding and opening stock department. It is the third major expansion of the plant's facilities within the past 18 months. Construction is expected to take about four months.

BOSTON, MASS.—The Kendall Co. has reported a 26% increase in earnings for the first 12 weeks of 1960, compared with the similar period of 1959. Net earnings for the first 12 weeks of 1960 were \$1,082,000 compared with \$857,000 earned for the same period of 1959. Kendall's sales of \$25,626,000 were down slightly from \$25,896,000 for the comparable period of 1959.

NEW YORK, N. Y.—Net earnings of United Merchants & Manufacturers in the first nine months of the current fiscal year amounted to \$10,274,000, 6% higher than earnings of \$9,670,000 in the comparable period of 1959. The earnings are after income tax provision of \$8,161,000 in the 1960 period and \$6,133,000 in the 1959 period.

NINETY SIX, S. C.—Greenwood (S. C.) Mills has announced plans to build a mill near here for the spinning and weaving of cotton. It is expected to employ some 350 persons. The \$6 million facility will be called the Sloan Plant. Construction is expected to start soon. The plant will be under the supervision of A. L. Strawn, supervisor of the Durst and Ninety Six Plants for Greenwood.

GREENVILLE, S. C.—Southern Weaving Co. has been awarded a contract by the Military Clothing & Textile Supply Agency of the Philadelphia Quartermaster Depot. The contract calls for 200,000 yards of green nylon webbing, 1½", at \$53,280.

SANFORD, N. C.—Production has begun at Federal Spinning Corp.'s new \$1 million long fiber knitting yarn plant and full scale operations are scheduled to begin by mid-May. The plant is already 50 to 75% operational and employment is approaching the expected 125 total. Employees are being trained on the worsted system preparatory equipment, roving and Arrow long fiber spinning frames which are being installed by Roberts Co., Sanford. Principal product at Federal will be knitting yarns in Orlon

and other long fiber synthetics plus blends with wool and worsted and all worsted. Yearly output is expected to be 2 to 2½ million pounds a year.

GRIFFIN, GA.—Rushton Cotton Mills will sell its 67 mill homes in the near future. Occupants of the houses will have first choice at the purchase of them. Alester G. Furman Co. of Greenville, S. C., has been retained to inspect and appraise the property prior to offering it for sale.

CHERRYVILLE, N. C.—Rhyne-Houser Mfg. Co.'s stockholders have voted to sell the company's physical assets to Burlington Industries. No stock was involved in the transaction since the stockholders gave the directors the authority to sell the firm on a cash basis. The firm presently employs some 320 persons. It operates three plants for the production of cotton peeler and Egyptian yarns, and ply Orlon yarns.

BIRMINGHAM, ALA.—Earnings of Avondale Mills in the 28 weeks ended March 13 were more than double those in the comparable period of last year. Earnings in the period totalled \$1,086,235 as compared with \$525,774 in the comparable period of 1959.

LANCASTER, S. C.—An increase of 37.1% in earnings has been reported by Springs Cotton Mills for the year ended January 2, 1960. Net profit for the year was \$13,708,555 as compared with \$10,001,972 in the previous year. At January 2 total assets were \$81,425,650 and liabilities were \$6,983,306. This compares with assets of \$72,852,089 and liabilities of \$9,638,306 at the end of the previous year. Springs also announced plans for a \$5 million expansion in facilities that will create some 350 jobs. Details were not given.

MT. HOLLY, N. C.—Kimberly Yarn Mills Inc. has ordered 36 Whitin Piedmont spinning frames, six Model M6 Even-Draft drawing frames, and four G14E Hi-Pro Long Draft roving frames from Whitin Machine Works. The Piedmont order totals 8,640 spindles; frames are 4" gauge.

BELMONT, N. C.—Stowe Spinning Co. will install 2,496 spindles of Whitin Piedmont spinning frame. Machines are 3½" gauge, 312 spindles each.

GREENSBORO, N. C.—Burlington Industries Inc. has reported substantial increases in profits and sales for the first half of the

current fiscal year. Consolidated net profits and sales for the six months to April 2 were \$21,205,000 against \$10,113,000 for the comparable period of the previous fiscal year. Sales amounted to \$464,568,000 as compared with \$378,035,000 previously. These figures include sales and earnings of James Lees & Sons Co. for this period. Burlington acquired James Lees on March 25 with the approval of the action by Lees stockholders. Lees stockholders will receive 2-1/3 shares of Burlington stock for each share of Lees. Burlington reports that it expects to spend in the neighborhood of \$40 million on modernization in the present fiscal year. This compares with just under \$30 million spent in the 1959 fiscal year, and is an increase over the amount the company originally budgeted for the current year.

KANNAPOLIS, N. C.—Cannon Mills Co. reports increased sales and decreased profits for 1959. In the year ended December 31, profit was \$10,230,739 on sales of \$207,096,821. This compares with profit of \$10,786,122 on sales of \$191,863,375 in 1958. Cost of goods sold totalled \$178,663,757 against \$162,062,661 in the previous year. At December 31 current assets were \$130,214,297 with liabilities of \$27,202,024. This compares with assets of \$120,087,672 and liabilities of \$21,188,568 in the previous year.

NEW YORK, N. Y.—Amerotron, textile division of Textron Inc., reported that sales and earnings for the year ended January 2, 1960, were the best since 1951. Sales for the period totalled \$67,346,000 and pretax earnings were \$5,190,000. The Amerotron division accounted for 22% of the firm's total sales.

KANNAPOLIS, N. C.—Cannon Mills Co. has announced plans for the construction of a new dyehouse and enlargement of packing, storage and shipping departments. The company also announced plans to replace obsolete weaving equipment as one of the first improvements in 1960.

NEW YORK, N. Y.—Reeves Bros. Inc. has reported profits of \$663,711 on sales of \$19,475,418 for the quarter ended April 2. This compares with profit of \$313,186 on sales of \$16,449,690 in the corresponding period in 1959. For the nine months ended April 2, profit totalled \$1,941,354 on sales of \$52,353,541 as against profit of \$432,523 on sales of \$42,418,569 in the comparable nine months in 1959.

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On To Atlantic City

THE American Textile Machinery Association will play host to 30,000 window shoppers at the American Textile Machinery Exhibition-International, May 23-27, at Convention Hall, Atlantic City, N. J.

More than 300 exhibitors—representing virtually every major machinery manufacturer in the U. S. and many from overseas—will be on hand to welcome you and to assist you in the inspection of their wares. In effect it will be machinery inventory week, and every textile process—from the opening room to the finishing plant—will be represented in this largest of all U. S. pilot plant presentations.

Tremendous strides have been made by machinery manufacturers since the last A.T.M.E. in 1954, and this one event offers an unparalleled opportunity to you to catch up with the progress that has taken place since then.

For many weeks now the BULLETIN staff has pored over descriptive literature made available by exhibitors. Beginning on Page 63 is a review of the highlights of this material. It falls far short of adequately describing the scope and significance of this year's show, but it will enable you to do a little advanced planning on the use of your time in Atlantic City. If you intend to cover the entire show, you'll need to plan your time carefully if you're going to see everything you should. If you're one of a delegation from your mill, advanced planning is a must. We hope you'll use both the booth descriptions and the reproduction of the Convention Hall floor plan to help you get the job done.

The BULLETIN is again pleased to act as official registrar for the A.T.M.E., co-ordinating the registration of all visitors with the periodic publication of registration lists. In this capacity, we hope to make it as easy as possible for you to register and to get your entry badge into Convention Hall. At the same time we hope exhibitors find the registration

lists helpful in contacting all the people they must see during show week.

The July issue of the BULLETIN will feature a review of the highlights of the show. We hope you will compare notes with us at that time.

With Renewed Vigor

THREE weeks after their eleventh annual meeting (see page 95), members of the American Cotton Manufacturers Institute launched phase one of their all-out co-ordinated effort toward import protection. Led by J. M. Cheatham, A.C.M.I. president-elect, representatives of the fiber, textile and apparel industries gathered in Washington April 27th to map their strategy and to seek legislative and administrative support for their program.

Holding top priority at the time of the Washington briefing were these projects:

- (1) The forthcoming renegotiations of the wool fabric tariff concessions: The present Geneva Reservation must not be weakened.
- (2) G.A.T.T. negotiations: There can be no further concessions made on textile items; textiles should not be included on the bargaining list.
- (3) G.A.T.T. representation: If further concessions are contemplated, textile industry representatives should be included on the negotiating team.
- (4) Section 22 of the Agricultural Adjustment Act: The Administration should approve Section 22 action now before the Tariff Commission. The measure is not enough, but it is a step in the right direction.

More ambitious projects for the group will include the abandonment of the two-price cotton system; a revised textile machinery depreciation schedule; and an end to government subsidization of foreign textile mills. Still the number one objective will be the establishment of specific import quotas, the granddaddy of all the industry's efforts,

and the one conceded least likely to reach fruition short of Congressional action.

Following the recommendation made at the annual meeting of the A.C.M.I. by Robert T. Stevens of J. P. Stevens & Co., the group which met in Washington will seek the support of other industries being affected by imports in the push for establishment of quotas. This joint action of all such industries will be necessary if a successful approach is to be made to Congress. Even with all the effort these industries can pool, it will take a lot of lobbying and a long time to accomplish the goal. Those working hardest for it know what they are up against and are going after it with more determination than ever. Not only do they deserve the industry's applause; they deserve its fullest support.

Unfortunately this support, in the past, has too often been nothing more than lip service. The ineffectiveness of it all was brought home with a sour note thud with the February address before the Charlotte Textile Club of now former Assistant Secretary of Commerce Henry Kearns. Using his remarks to gauge the industry's progress in heading off the import problem, it is painfully obvious that the industry was doing little more than spinning its wheels. Perhaps worse, it gave itself too much credit for a job it hadn't done at all well. Mr. Kearns was pretty well blistered for his blunt appraisal of the industry's troubles, but his dismal impression of the textile industry's need for government remedial action brought the situation in proper focus. By pointing out that the textile industry was impressing only itself with its cries for protection, Mr. Kearns left no doubt where he and his department stood in interpreting them.

For the most part, up until recently, the industry's arguments for a fair shake in the business of world trade took the form of a general wailing tone. Too few sought to speak for too many. The people who were supposed to be listening weren't. It is most encouraging to see this change in tactics. We're hopeful that by it the A.C.M.I. will win many new recruits in its battle to get the industry's just desserts.

While all this is going on, the industry at the same time must not lose sight of the fact that it has other troubles of

its own making. Some economists, for example, are already predicting a downturn in textile activity for next year. They point out that demand has slacked off in certain quarters, and that inventories will be building up for the rest of this year. They point out that too many mills are now operating on a six-day schedule, a practice that invariably brings supply out of kilter with demand. If enough mills do this, then of course the entire industry pays the consequences. There was healthy caution on this score a year ago; there is need for more now.

Wash-And-Wear Discussed

Cotton consumption in the U. S. can be increased through improving quality and greater usefulness, according to Frank McCord of the National Cotton Council, speaking at a recent wash-and-wear conference attended by Southern Experiment Station representatives and held at the U. S. Department of Agriculture's Southern Regional Research Laboratory in New Orleans, La.

Such advances can be brought about through research, not only on wash-and-wear but on ways of improving other properties of cotton, McCord said.

George S. Buck, also of the National Cotton Council, told the representatives that within the past two decades research has succeeded in reducing the cost of producing cotton by nine cents a pound.

Consumer acceptance of present-day commercial wash-and-wear finishes proves that they are good, according to Harry C. Donaldson Jr. of Cluett, Peabody & Co. He reminded the audience that advances in wash-and-wear have been more rapid than in many other developments within the first five or ten-year period.

It was pointed out at the conference that the production of resin finished cotton fabrics increased from 600 million linear yards in 1955 to 1,900 million yards in 1959.

C. L. Hoffpauir, assistant director of the Southern Division, outlined some of the goals of research to improve the competitive position of cotton in both wash-and-wear and other fields. Factors which play a large part in determining consumer satisfaction, he said, are esthetic consideration, ease of care, comfort, durability and economy.

TEXTILE INDUSTRY SCHEDULE

May 11-14 (W-Sa)—Annual outing, **CAROLINA YARN ASSOCIATION**, Pinehurst, N. C.

May 19-21 (Th-Sa)—The 60th anniversary meeting, **GEORGIA TEXTILE MANUFACTURERS ASSOCIATION**, Diplomat Hotel and Country Club, Hollywood, Fla.

May 23-27 (M-F)—**AMERICAN TEXTILE MACHINERY EXHIBITION**, Atlantic City, N. J.

May 26-28 (Th-Sa)—Annual meeting, **SOUTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, The Cloister, Sea Island, Ga.

May 31-June 2 (Tu-Th)—11th Annual **COTTON RESEARCH CLINIC** (sponsored by The National Cotton Council), Grove Park Inn, Asheville, N. C.

June 6-17—Short course for **EXECUTIVES OF THE TEXTILE INDUSTRY**, School of Textiles, N. C. State College, Raleigh.

June 23-25 (Th-Sa)—52nd annual convention, **SOUTHERN TEXTILE ASSOCIATION**, The Grove Park Inn, Asheville, N. C.

Sept. 8-9 (Th-F)—Fall technical sessions, **TEXTILE QUALITY CONTROL ASSOCIATION**, The Clemson House, Clemson, S. C.

Sept. 15-16 (Th-F)—Annual meeting, **COMBED YARN SPINNERS ASSOCIATION**, The Cloister, Sea Island, Ga.

Sept. 15-16 (Th-F)—Textile Processing Symposium, **AMERICAN GAS ASSOCIATION**, Sedgefield Inn, Greensboro, N. C.

Sept. 15-16 (Th-F)—Annual outing, **CHATTANOOGA YARN ASSOCIATION**, The Read House, Chattanooga, Tenn.

Sept. 27-28 (Tu-W)—The ninth annual **CHEMICAL FINISHING CONFERENCE**, sponsored by the National Cotton Council, Statler Hotel, Washington, D. C.

Sept. 28-30 (W-F)—Annual meeting, **NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

Oct. 3-8 (M-F)—The 21st **SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

Oct. 18-19 (Tu-W)—Technical Advisory Committee and Board of Trustees Meeting, **INSTITUTE OF TEXTILE TECHNOLOGY**, Charlottesville, Va.

Oct. 19-21 (Tu-F)—Fall meeting, **COMMITTEE D-13, A.S.T.M.**, Sheraton-Atlantic hotel, New York City.

Oct. 19-20 (W-Sa)—Annual meeting, **CARDED YARN ASSOCIATION**, The Grove Park Inn, Asheville, N. C.

Nov. 12 (Sa)—Fall meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES**, Thach Auditorium, Auburn University, Auburn, Ala. (Carding and Spinning Section).

Nov. 12 (Sa)—Annual meeting, **GEORGIA TEXTILE EDUCATION FOUNDATION**, A. French Textile School, Georgia Tech, Atlanta.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday

Index to Advertisers

-A-		Electro-Mechanical Engineering Co. 114		-O-	
Adolf, Emil 33		Extremulus, Inc. 29		Owings Co., Richard A. 143	
Allen Beam Co. 126					
Allied Chemical Corp., Solvay Process Div. 20		-F-		-P-	
American Moistening Co. 20		Fabronics Corp. 143		Pabst Brewing Co. 137	
American Textile Machinery Exhibition 20		Ferguson & Associates, John 101		Parks-Cramer Co. 45	
American Viscose Corp. 20		Ferguson Gear Co. 121		Penick & Ford, Ltd., Inc. 23	
Anheuser-Busch, Inc. (Corn Products Div.) 20		Fisher Mfg. Co. 14		Perfecting Service Co. 123	
Antara Chemicals Div. of General Aniline & Film Corp. 24 and 25		Foster Machine Co. (Lindley Div.) 27		Perkins & Son, Inc., B. F. 70	
Armstrong Cork Co. 27		Foster Machine Co. 14		Philadelphia Quartz Co. 123	
Arnold, Hoffman & Co., Inc. 27				Pilot Life Insurance Co. 70	
		-G-		Pneumafil Corp. 82	
-B-		Gaston County Dyeing Machine Co. 115		Price Spindle & Flyer Co., Inc. 82	
Bahan Textile Machinery Co. 4		Gastonia Roller, Flyer & Spindle Co. 5			
Bahson Co., The 35		Gates Rubber Co., The 11		-R-	
Barber-Colman Co. 122		Geigy Dyestuff Div. of Geigy Chemical Corp. 110		Radiator Specialty Co. 128	
Barkley Machine Works 2		General Asbestos Rubber Div. of Raybestos-Manhattan, Inc. 57		Raybestos-Manhattan, Inc. 110	
Batson Co., Louis P. 40		General Dyestuff Co. Div. of Allied Chem. Corp. 40		General Asbestos & Rubber Div. 143	
Bendix Aviation Corp. (Eclipse Mch. Div.) 134		Georgia-Carolina Oil Co. 112		Raymond Service, Inc., Chas. P. 112	
Benjamin Booth Co., The 112		Graton & Knight 143		Reiner, Inc., Robert 112	
Bullard Clark Co., The 3		Griffin Sons, Inc., Ira L. 22		Rhoads & Sons, J. E. 112	
Burkart-Schlier Chemical Co. 15				Rice Dobby Chain Co. 143	
Butterworth & Sons Co., H. W. 15		-H-		Ridenhour, Hoyt A. 80 and 81	
		Hamilton & Sons Machine Mfg. Co., Inc. 13		Riggs & Lombard, Inc. 3	
-C-		Hart Products Corp. 51		Roberts Company, The 41	
Campsite Catering Service 92		Herr Mfg. Co., Inc. 50 and 51		Royce Chemical Co. Back Cover	
Carolina Brush Co. 122		Holyoke Machine Co. 22		Rudnick, Edward S. 41	
Carolina Loom Reed Co. 16		Houghton & Co., E. F. 22			
Carter Traveler Co. (Div. of A. B. Carter, Inc.) 36 and 37		Howard Bros. Mfg. Co. 22		-S-	
Celanese Corp. of America 122				Saco-Lowell Shops 34	
Chandler Machine Co. 26		-I-		Scott Testers, Inc. 17	
Chemstrand Corp. (Acrilan) 32		Ideal Machine Shops, Inc. 76		Seydel-Woolley & Co. 12	
Clinton Corn Processing Co. 111		Industrial Coatings, Inc. 128		Signode Steel Strapping Co. 12	
Cluett, Peabody & Co., Inc. 68 and 69		Interlock Screw & Bolt Corp. 129		Sims Metal Works 19	
Coker Machine & Foundry Co. 130		Interstate Textile Equipment Co. 129		Sinclair Refining Co. 106	
Cone Mills Corp. 61				Silp-Not Belting Corp. 43	
Corn Products Sales Co. 110		-J-		Smith Textile Apron Co. 49	
Crompton & Knowles Corp. 130		Jacobs Mfg. Co., The E. H. (Northern and Southern Divisions) 97		Snedekar & Co., Inc. 143	
Cronland Warp Roll Co., Inc. 54		Johnson Corp., The 97		Sonoco Products Co. 139	
Crown Chemical Co. 97				Southern Machinery Co. 143	
Curtis & Marble Machine Co. 143		-K-		Southern Shuttles Div. (Steel Heddle Mfg. Co.) 143	
		Keever Starch Co. 119		Southern Textile Works 30 and 31	
-D-		Kirkman & Dixon Machinery Co. 85		Staley Mfg. Co., A. E. (Industrial Div.) 54	
Dary Ring Traveler Co. 116		Kluttz Rings, Inc. 21		Star Paper Tube, Inc. 97	
Davis A. Benson (Ben) 143		-L-		Steel Heddle Mfg. Co. and Southern Shuttles Div. 143	
Dayton Rubber Co., The 8 and 9		Laurel Soap Mfg. Co., Inc. 119		Steel & Tank Service Co. 143	
Dillard Paper Co. 59		Leeson Corp. 125 and 130		Stover Co., Charles G. 143	
Dixon Corp. 61		Lenkotex Co., Inc. 145			
Dolge Co., The C. B. 7		Livermore Corp., H. F. 78		-T-	
Draper Corp. 110		Long Spindle & Machinery Co. 130		Tennessee Corp. 109	
Dronsfeld Bros., Ltd. 110		Loom Products Co. 130		Tensitron, Inc. 143	
		Loper Co., Ralph E. 118		Terrell Machine Co., Inc., The 6 and 62	
-E-				Textile Apron Co. 134	
Eagle Roller Repair Co. 143		-M-		Textile Grinder Co. 116	
Eaton Mfg. Co. (Dynamatic Div.) 28		Manhattan Rubber Division 110		Textile Hall Corp. 139	
Edda International Corp. 133		Marshall & Williams Corp. 122		Textile Laboratories, The 142	
		McDonough Power Equipment, Inc., Machine & Foundry Div. 126		Textile Loom Reed Co. 142	
		McLeod Leather & Belting Co. 128		Thomaston Mills 142	
		Metro-Atlantic, Inc. 126		Times Square Hotel 126	
		Mill Devices Co. (Div. of A. B. Carter, Inc.) 118		Todd-Long Picker Apron Co. 126	
		Mitcham & Co., Harley 126		Ton-Tex Corp. 126	
		Mooresville Iron Works, Inc. 118		Trumeter Co. 126	
		Moretex Chemical Products, Inc. 118		Trust Co. of Georgia 143	
				Turner & Chapman 143	
		-N-		-U-	
		National Aniline Div., Allied Chemical & Dye Corp. 47		U. S. Ring Traveler Co. 11	
		National Drying Machine Co. 131		Uster Corp. 11	
		National Ring Traveler Co. 46			
		National Starch & Chemical Corp. 114		-W-	
		N. Y. & N. J. Lubricant Co. 127		Watson & Desmond 86 and 87	
		Nopec Chemical Co. (Jacques Wolf Div.) 127		Watson-Williams Mfg. Co. 44	
				West Point Foundry & Machine Co. 10	
				Whitinsville Spinning Ring Co. 18	
				Wolf & Co., Jacques 114	
				Wonalancet Co. 114	
				-Y-	
				Young Machine Co. F. A. 127	

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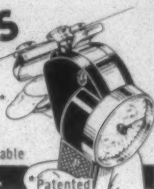
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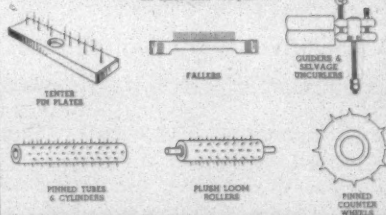
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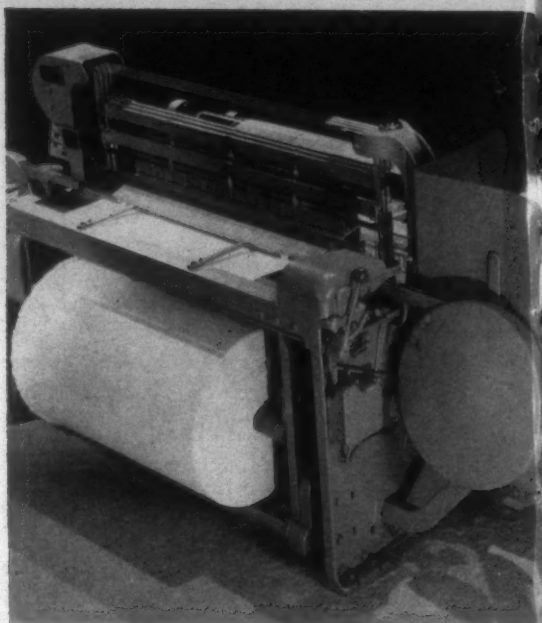
. . . features

A.T.M.A. Parade Of Progress —A Preview of the American Textile Machinery Exhibition-International	63
Import Problem Monopolizes Discussions At Eleventh Annual A.C.M.I. Meeting	95
Cotton Fiber Quality And Mill Operation By Jim N. Little, S. C. Mayne Jr. and Earl E. Berkley	99
A Measurement Of Combing Efficiency By Jack Simpson and George F. Ruppenicker Jr.	103
Eagle & Phenix —A Modern Historic Mill	108
Satisfying Retailer Quality Standards	113
The Loomfixer & His Job (Part 18) By Wilmer Westbrook	117
The Designing Of Pile Fabrics (Chapter 6) By E. B. Berry	120
A Review Of Spinning Improvements By Robert M. Jones	124

. . . and includes

New Products	39	Mill News	138
New Literature	55	Editorials	140
News of Suppliers	58	Textile Industry Schedule	141
Personals	135	Index To Advertisers	142
Obituaries	137	Classified Advertising	143

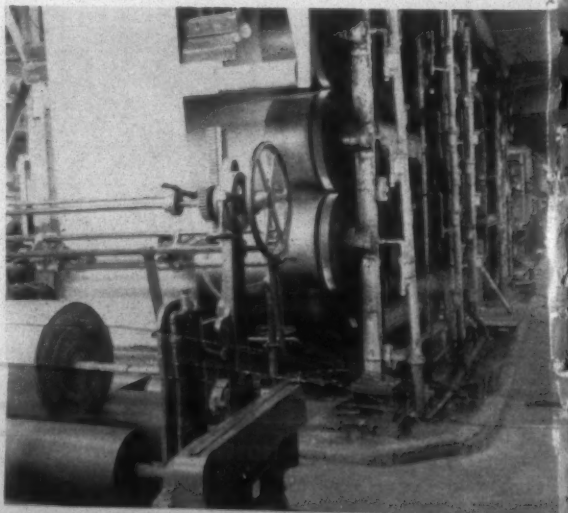
TEXTILE BULLETIN solicits appropriate material from contributors, with payments made at regular space rates. Material should be addressed to The Editors, P. O. Box 1225, Charlotte 1, N. C.



Draper Shuttleless Loom, Page 73



A.C.M.I.'s annual meeting, Page 95



A Modern, Historic Mill, Page 108

Less than **8%** account
of loom parts for more than
80% of downtime!

Studies conducted by H.F.Livermore Corporation in the course of Research and Development for improved loom performance prove that *less than 8% of all the parts in a loom account for more than 80% of downtime.*

Highly Stressed Parts — the Costly 8%

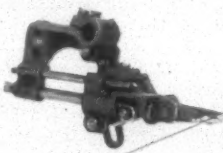
This vital 8% is made up of those highly stressed parts which are continuously subjected to the severe punishment of violent impact and repeated shock loads during loom operation. When they fail, they do so suddenly, resulting in costly runs of imperfect fabric. Today's trend toward increased operating speeds makes the performance of these highly stressed parts even more critical.

Metallurgical Skills - Creative Engineering

HFL has been solving problems of the weave room for three generations through creative engineering, metallurgical skills, and efficient production techniques. Rapid advancement in the field of metallurgy has provided most important means by which *improved* loom parts can be developed. For example, pearlitic and carbon steel alloys offer greater impact strength and less weight than conventional cast iron. H.F.Livermore Corporation redesigns highly stressed loom parts, incorporating the advantages of these improved metals. *The results are always better performance and from 300% to 1000% longer useful working life.*



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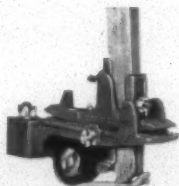
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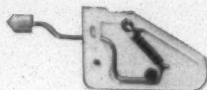
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